

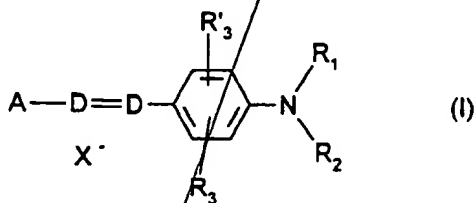
**WHAT IS CLAIMED IS:**

1. A ready-to-use composition for dyeing keratin fibers, comprising:

(i) at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below, and

(ii) at least one thickening polymer;

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH<sub>2</sub> radicals; or

R<sub>1</sub> and R<sub>2</sub> may form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from

RECEIVED: 5/27/66

oxygen and nitrogen, which can be substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

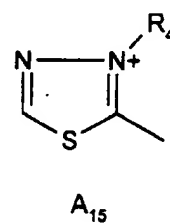
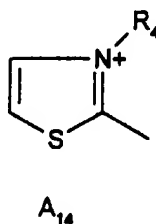
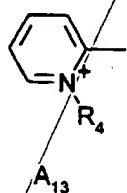
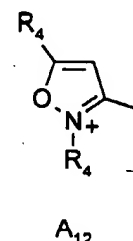
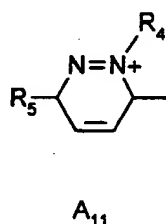
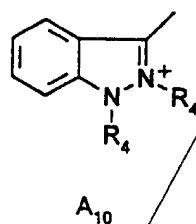
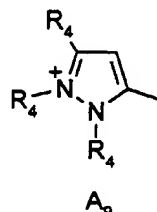
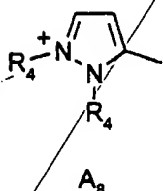
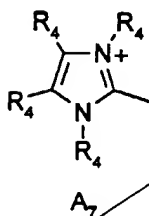
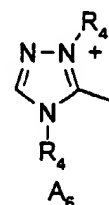
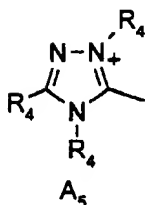
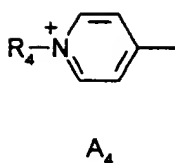
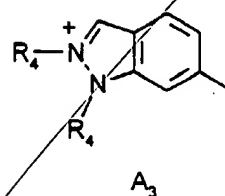
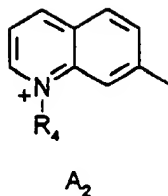
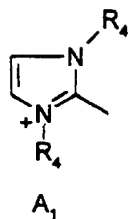
R<sub>3</sub> and R'<sub>3</sub>, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub> alkoxy radicals and acetyloxy radicals,

X<sup>-</sup> is chosen from anions,

A is chosen from structures A<sub>1</sub> to A<sub>19</sub> below:

660020-50764260

pub  
A cont'd

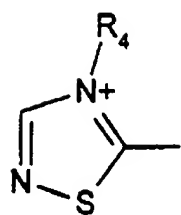


066020407414600

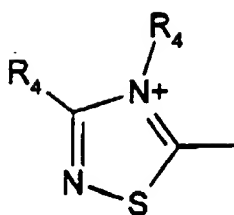
sub  
A cont 8

LAW OFFICES

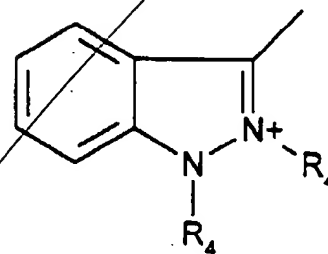
FINNEGAN, HENDERSON,  
 FARABOW, GARRETT,  
 & DUNNER, L.L.P.  
 1300 I STREET, N. W.  
 WASHINGTON, D. C. 20005  
 202-408-4000



A<sub>16</sub>

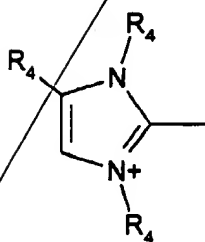


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

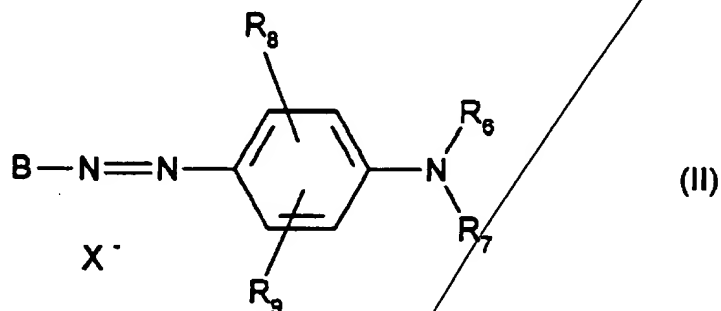
R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

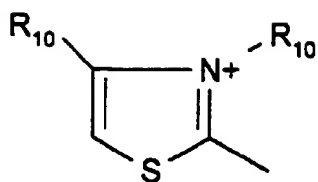
$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

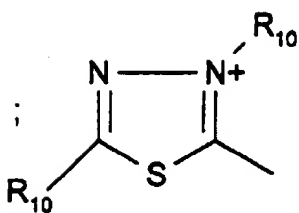
B is chosen from structures  $B_1$  to  $B_6$  below:

LAW OFFICES

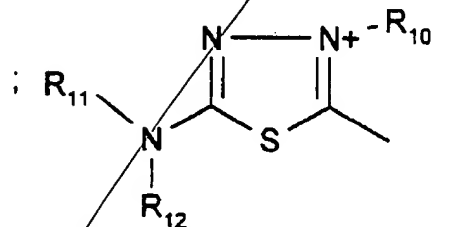
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



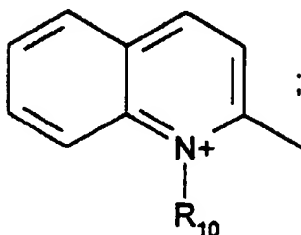
B1



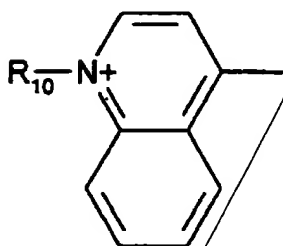
B2



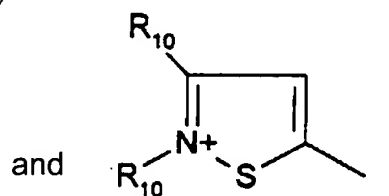
B3



B4



B5



B6

in which:

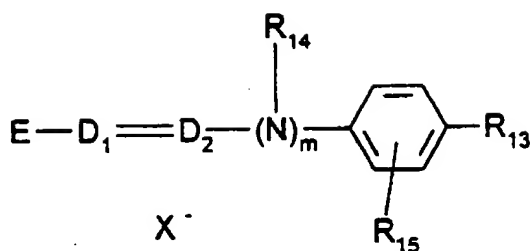
$R_{10}$  is chosen from  $C_1$ - $C_4$  alkyl radicals, and

$R_{11}$  and  $R_{12}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals;

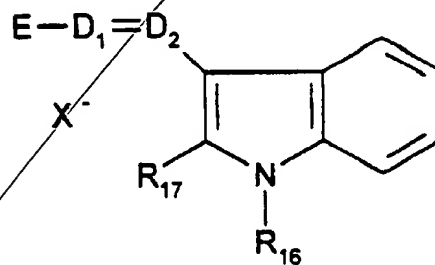
(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



(III)



(III')

in which:

$\text{R}_{13}$  is chosen from a hydrogen atom,  $\text{C}_1\text{-C}_4$  alkoxy radicals, halogen atoms and an amino radical,

$\text{R}_{14}$  is chosen from a hydrogen atom,  $\text{C}_1\text{-C}_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from  $\text{C}_1\text{-C}_4$  alkyl radicals,

$\text{R}_{15}$  is chosen from a hydrogen atom and halogen atoms,

$\text{R}_{16}$  and  $\text{R}_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $\text{C}_1\text{-C}_4$  alkyl radicals,

$\text{D}_1$  and  $\text{D}_2$ , which may be identical or different, are chosen from a nitrogen atom and a  $-\text{CH}$  group,

$m$  is 0 or 1,

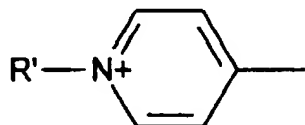
wherein when  $\text{R}_{13}$  is an unsubstituted amino group,  $\text{D}_1$  and  $\text{D}_2$  are both a

66020-50441-00000

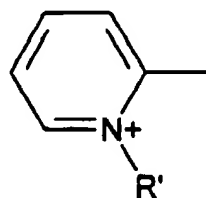
-CH group and m is 0,

X<sup>-</sup> is chosen from anions,

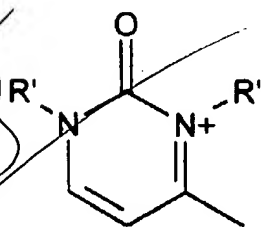
E is chosen from structures E<sub>1</sub> to E<sub>8</sub> below:



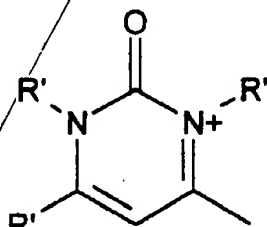
E1



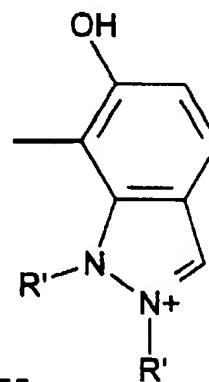
E2



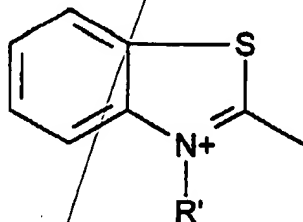
E3



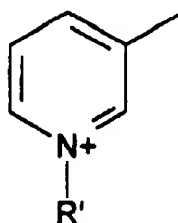
E4



E5



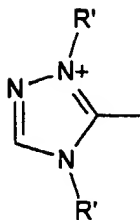
E6



E7



and

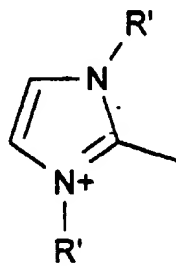


E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be

further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

and

- and wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

2. The composition according to Claim 1, wherein said keratin fibers are human keratin fibers.

3.  
§. The composition according to Claim 2, wherein said human keratin fibers are hair.

4.  
§. The composition according to Claim 1, wherein in formulae (I), (II), (III) and (III'), the C<sub>1</sub>-C<sub>4</sub> alkyl radicals and the C<sub>1</sub>-C<sub>4</sub> alkoxy radicals are chosen from methyl, ethyl, butyl, methoxy and ethoxy radicals.

5.  
§. The composition according to Claim 1, wherein said anions are chosen from chloride, methyl sulfate and acetate.

6.  
§. The composition according to Claim 1, wherein said halogen atoms of R<sub>3</sub>, R'<sub>3</sub>, R<sub>8</sub>, R<sub>9</sub>, R<sub>13</sub>, and R<sub>15</sub> are chosen from bromine, chlorine, iodine, and fluorine.

7. The composition according to Claim 1, wherein said at least one thickening polymer comprising at least one sugar unit is chosen from:

- (ii)<sub>1</sub> - nonionic guar gums;
- (ii)<sub>2</sub> - biopolysaccharide gums of microbial origin;
- (ii)<sub>3</sub> - gums derived from plant exudates;
- (ii)<sub>4</sub> - pectins;
- (ii)<sub>5</sub> - alginates;
- (ii)<sub>6</sub> - starches; and
- (ii)<sub>7</sub> - hydroxyalkylcelluloses and carboxyalkylcelluloses.

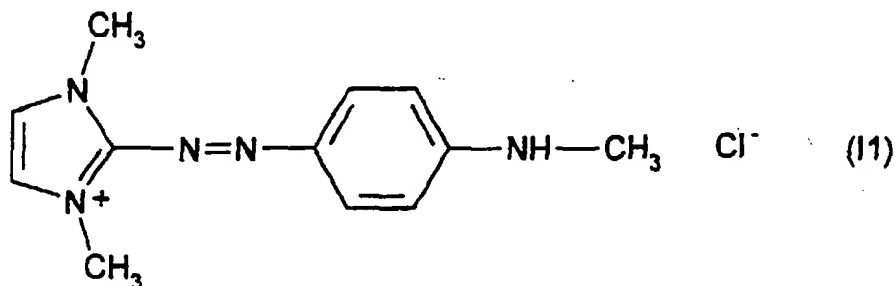
8.  
§. The composition according to Claim 1, wherein said

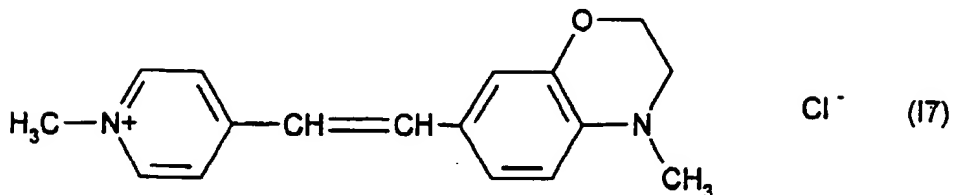
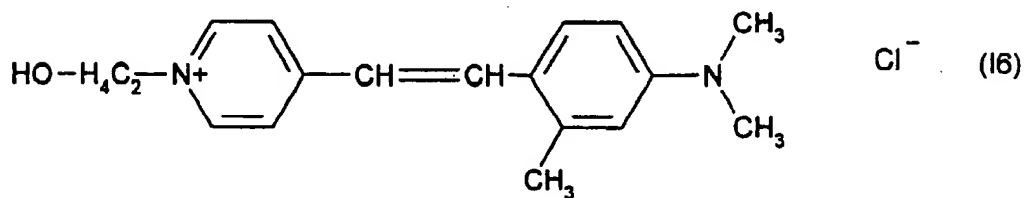
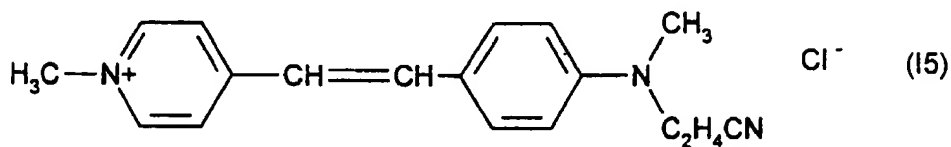
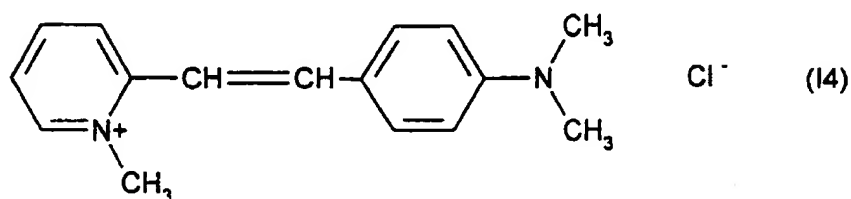
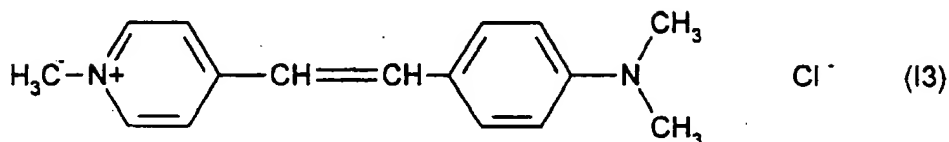
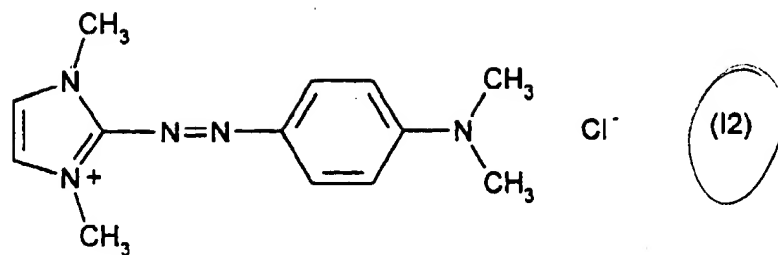
05725.0441-00000

biopolysaccharide gums of microbial origin are chosen from scleroglucan gum and xanthan gum.

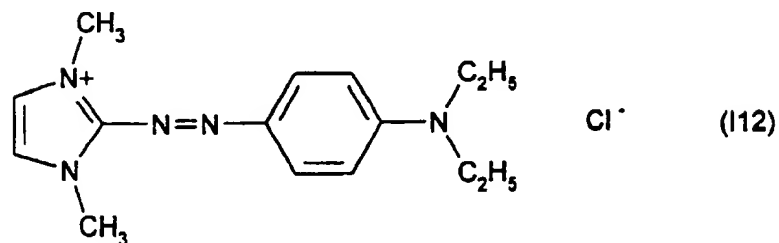
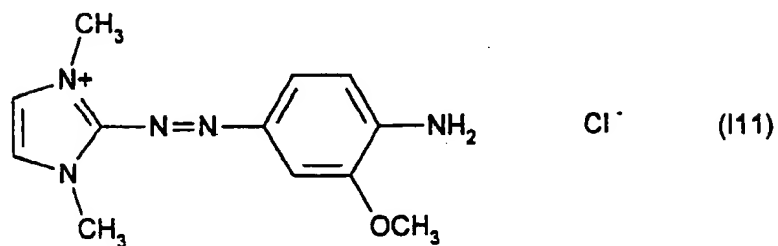
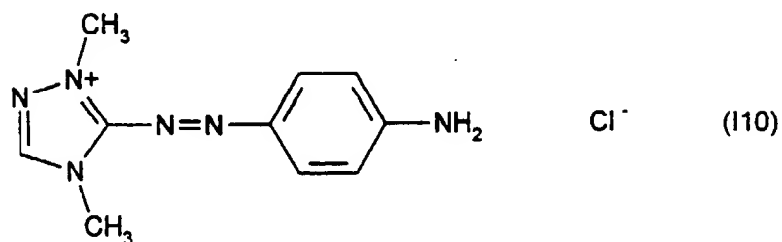
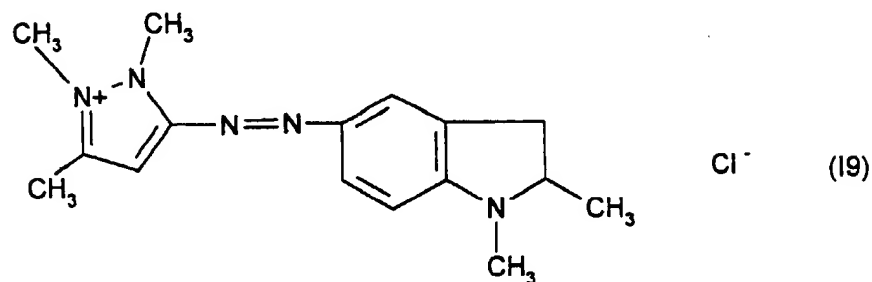
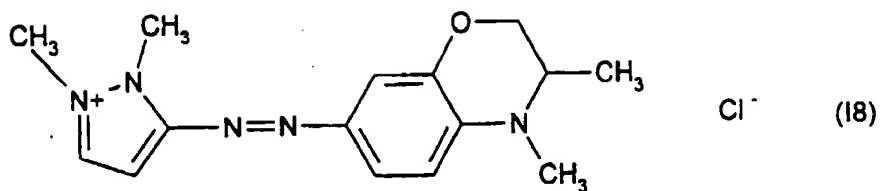
<sup>8</sup> The composition according to Claim <sup>1</sup> ~~7~~, wherein said gums derived from exudates are chosen from gum arabic, ghatti gum, karaya gum, gum tragacanth, carrageenan gum, agar gum and carob gum.

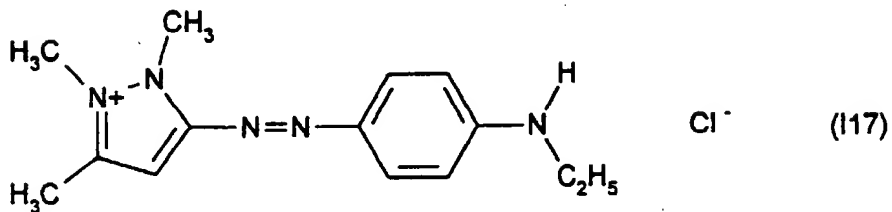
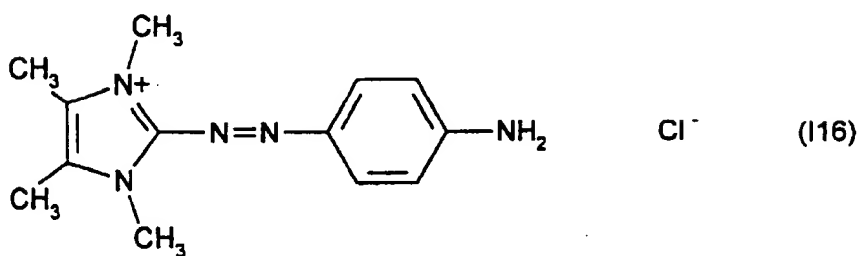
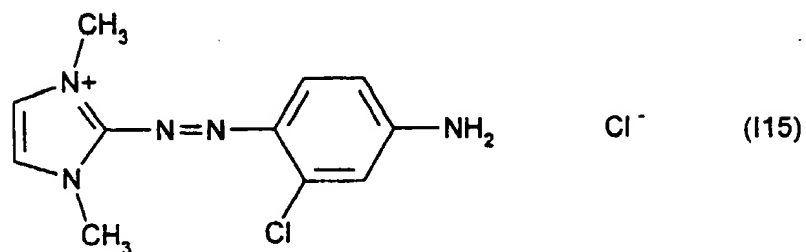
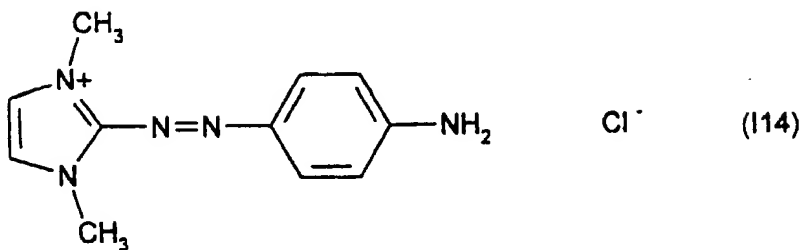
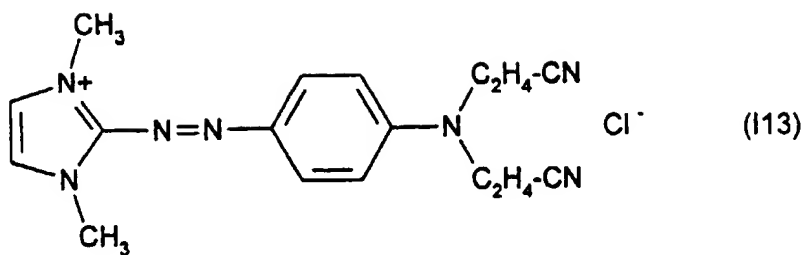
<sup>9</sup> ~~10~~ The composition according to Claim 1, wherein said at least one cationic direct dye of formula (I) is chosen from compounds of formulae (I 1) to (I 54) below:



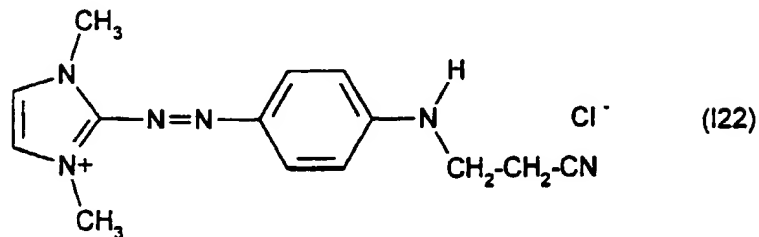
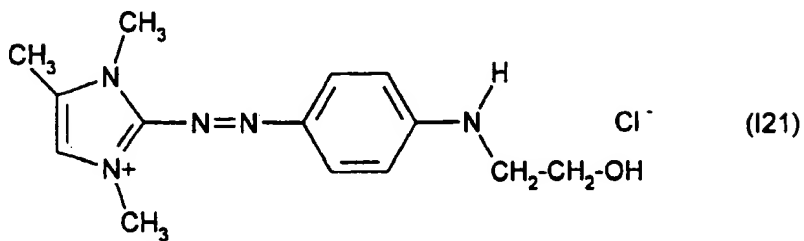
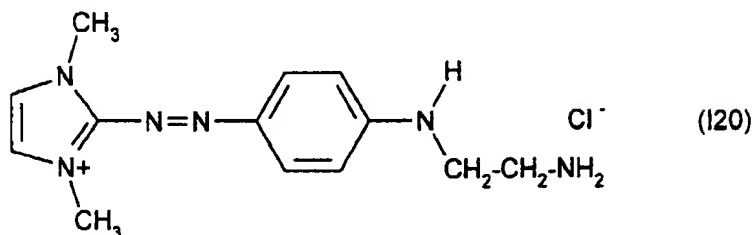
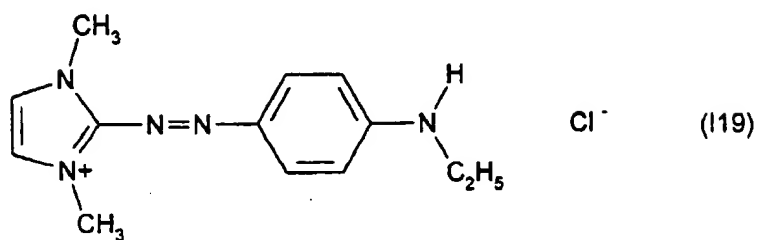
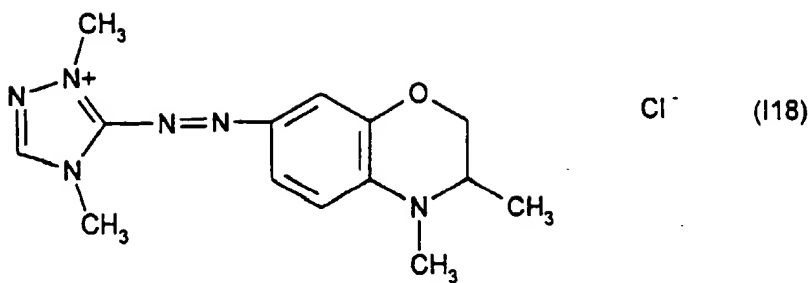


00441-00000-05725





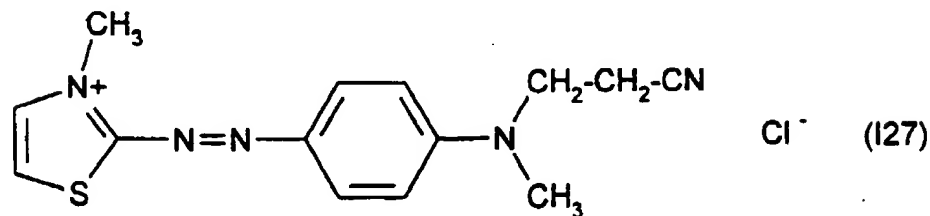
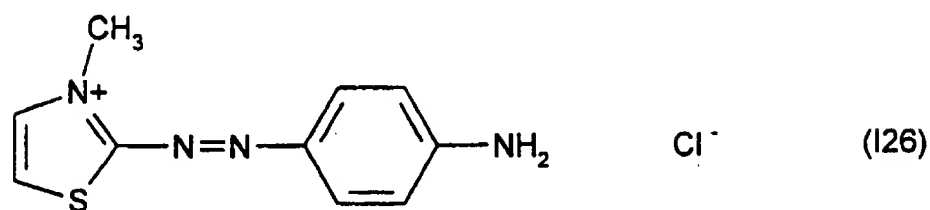
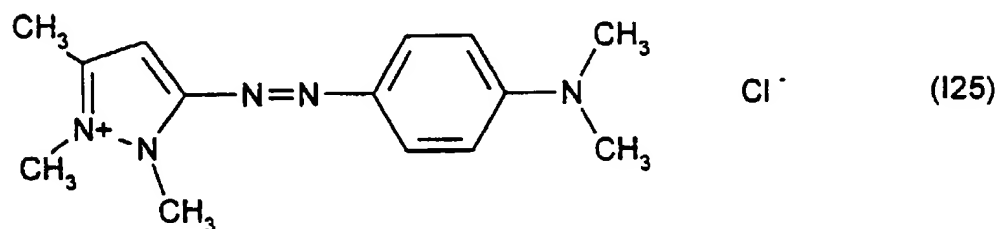
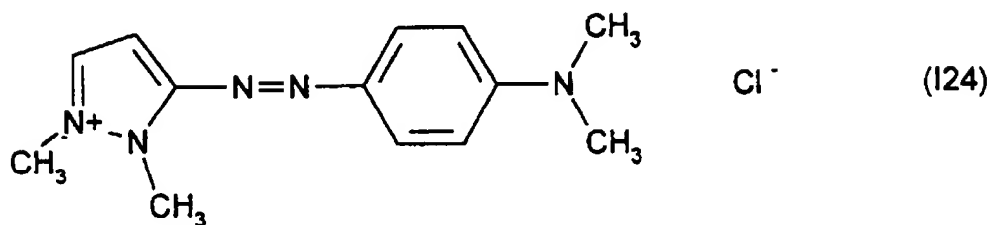
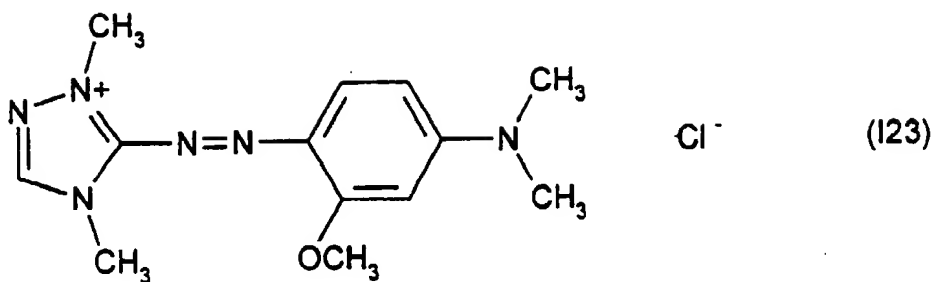
000020-50761E60



00002050761E60

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

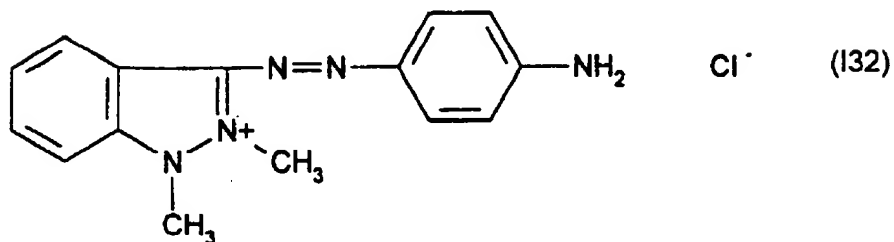
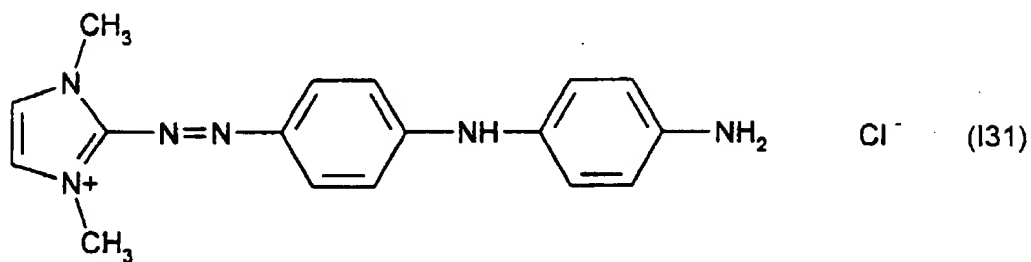
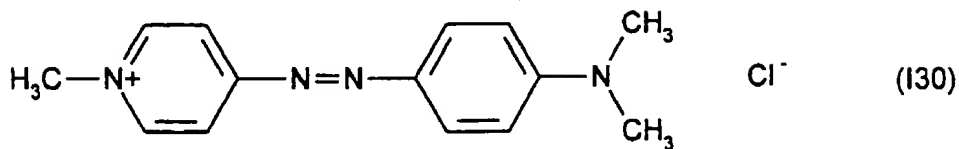
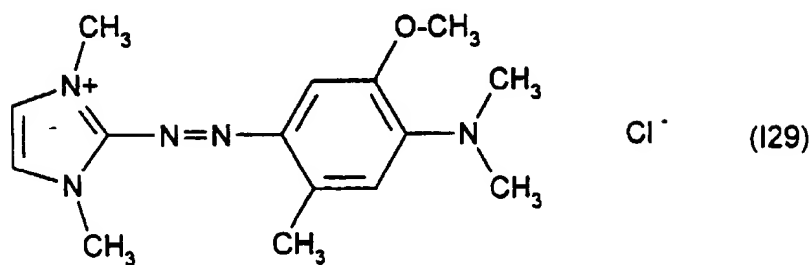
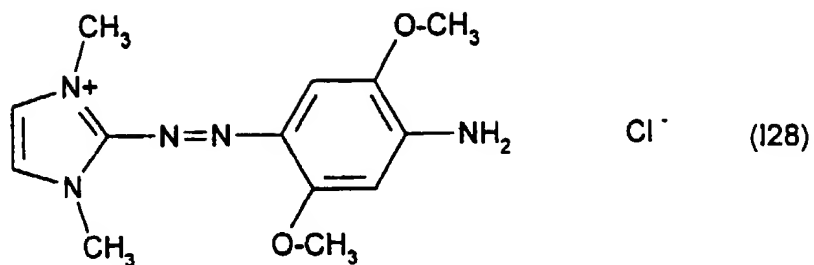


6680.00-50767660

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N.W.  
WASHINGTON, D. C. 20005  
202-408-4000

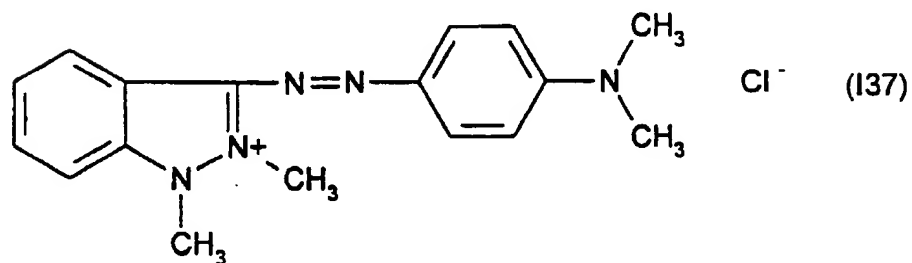
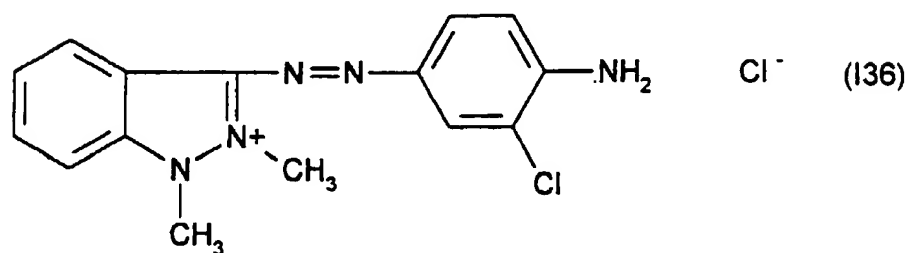
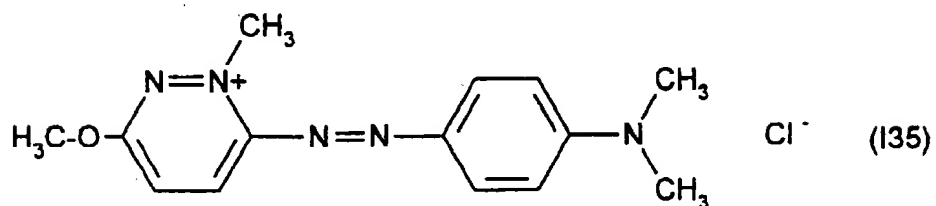
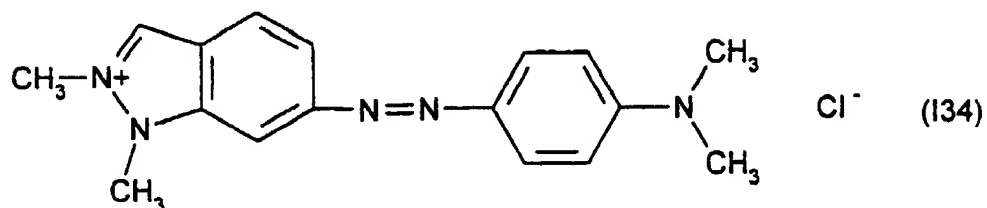
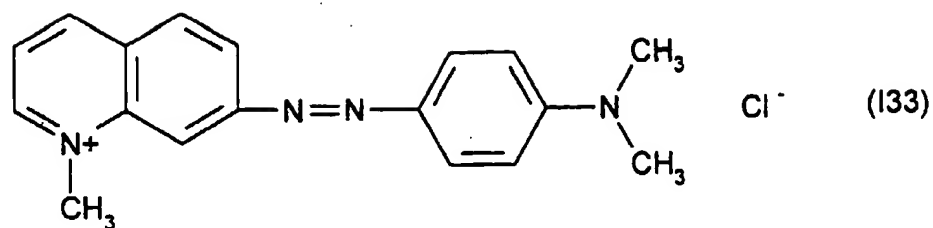




000020 50767660

LAW OFFICES

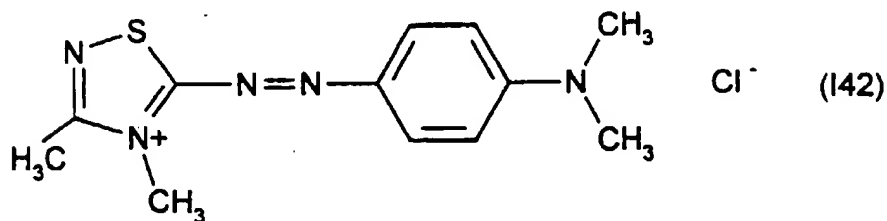
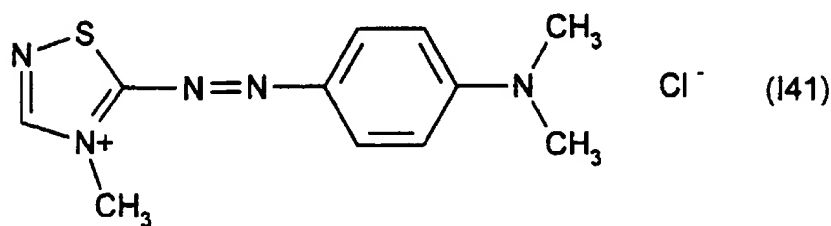
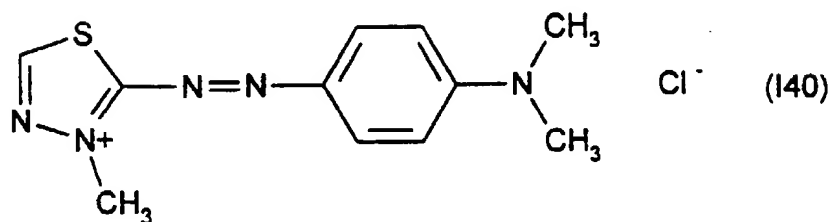
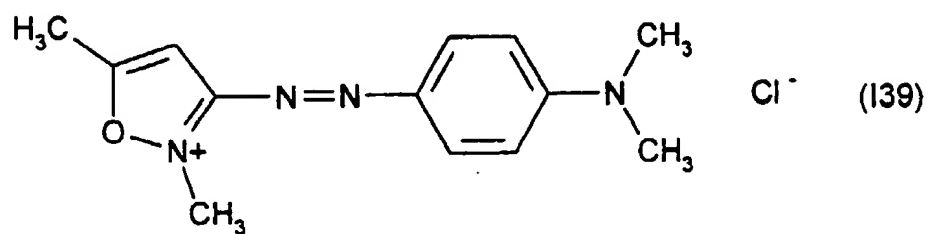
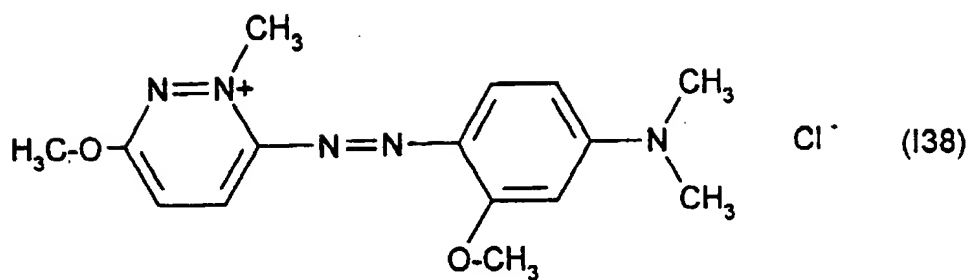
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



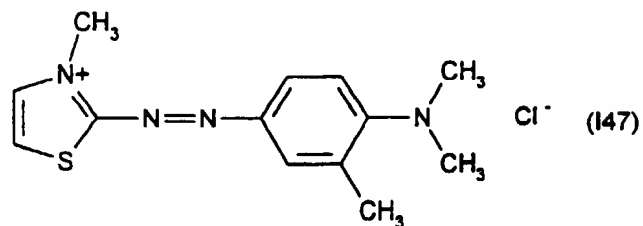
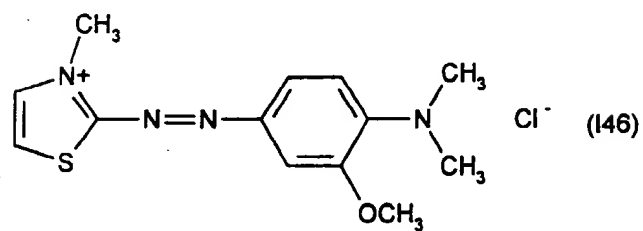
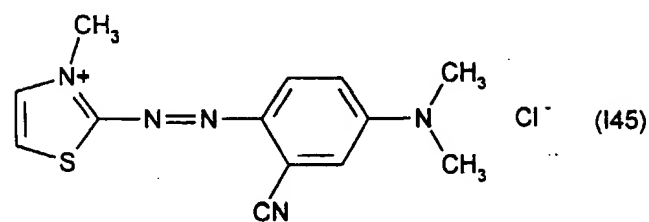
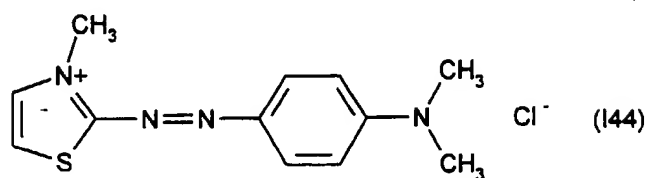
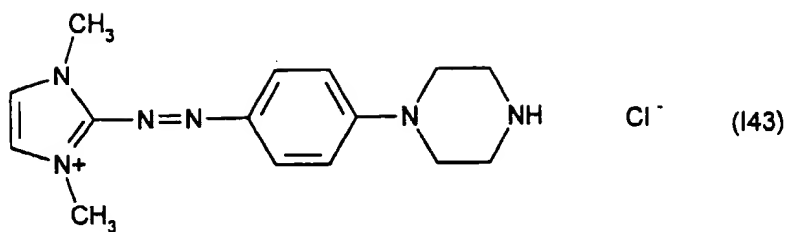
000020-50767E60

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



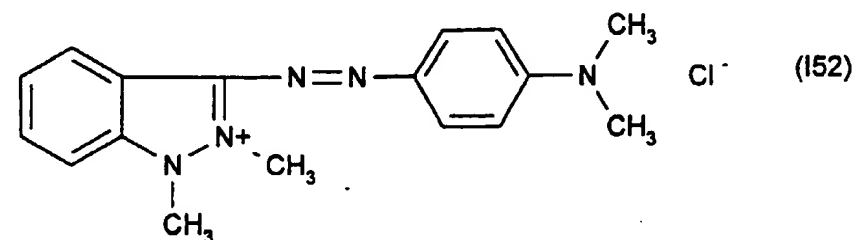
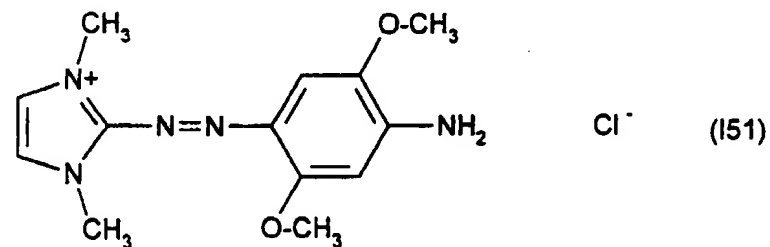
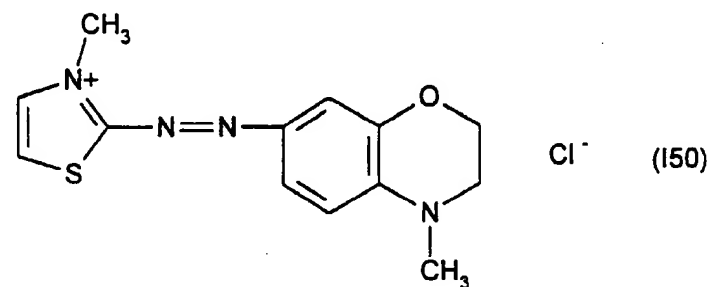
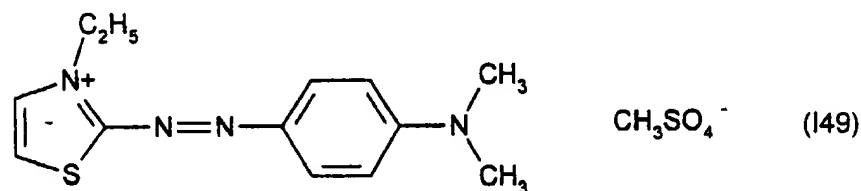
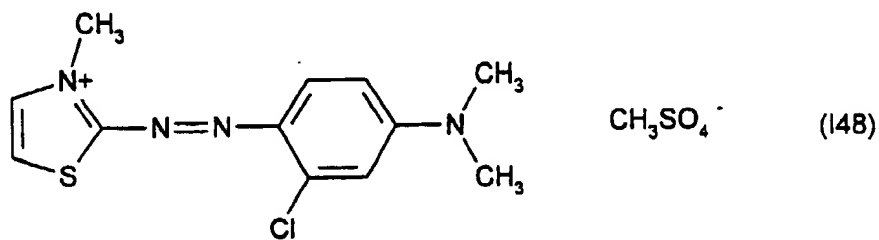
00002050764660



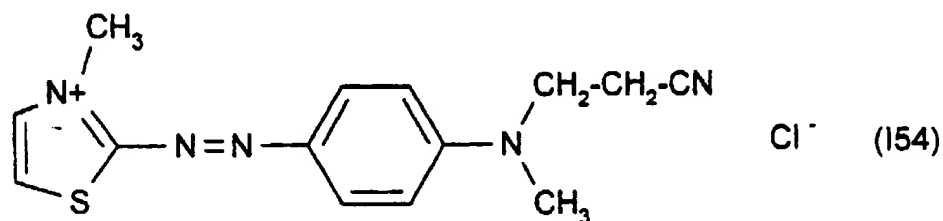
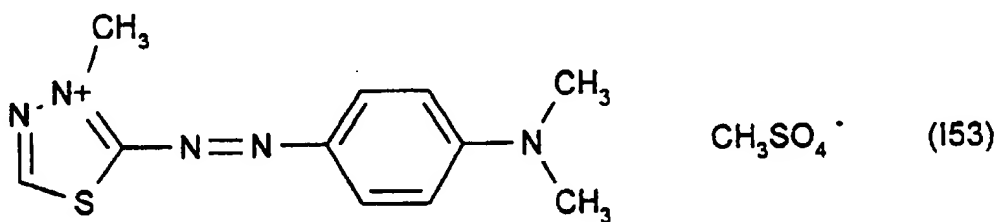
668020-5076760

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

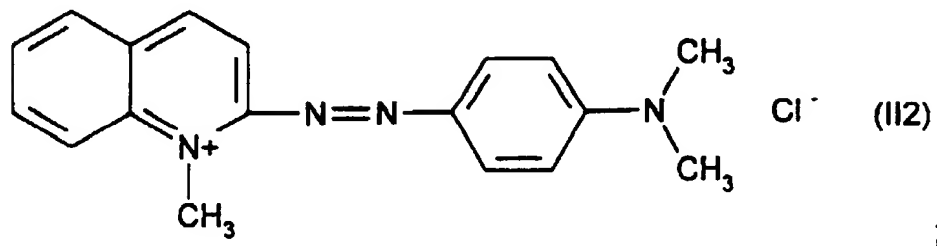
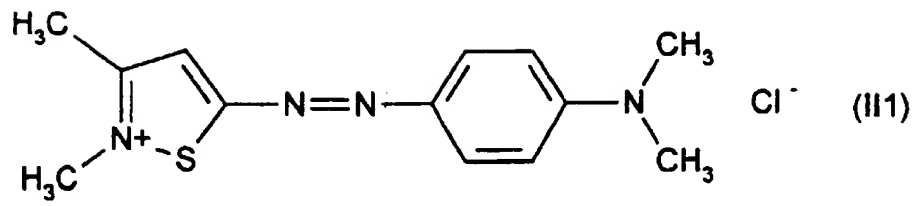


668020-50764E60



11. The composition according to Claim 10, wherein said at least one cationic direct dye is chosen from said compounds of formulae (I1), (I2), (I14) and (I31).

12. The composition according to Claim 1, wherein said at least one cationic direct dye of formula (II) is chosen from compounds of formulae (II1) to (II9) below:



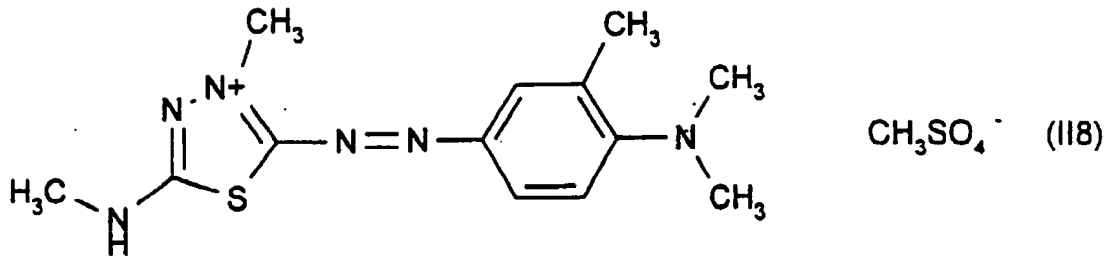
663020" 50764E60

LAW OFFICES

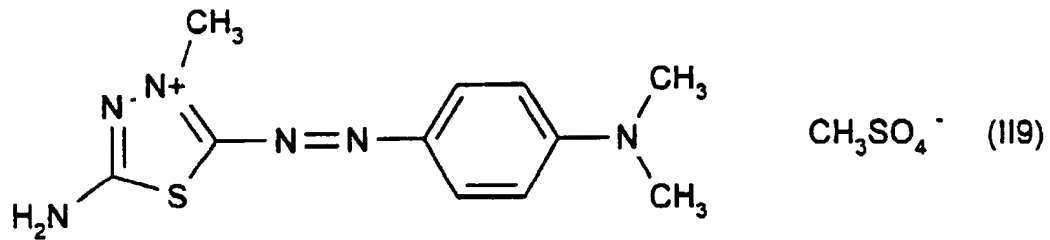
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000





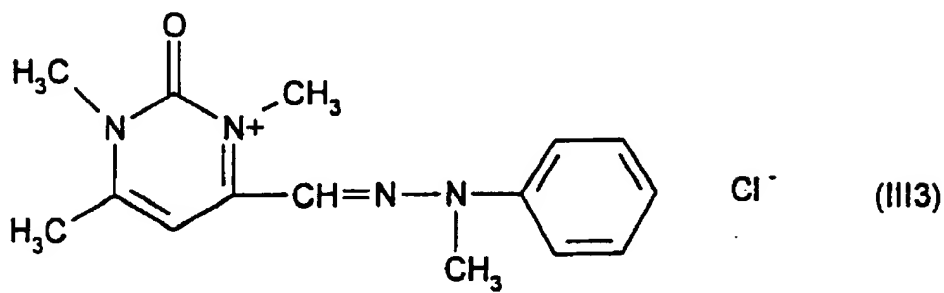
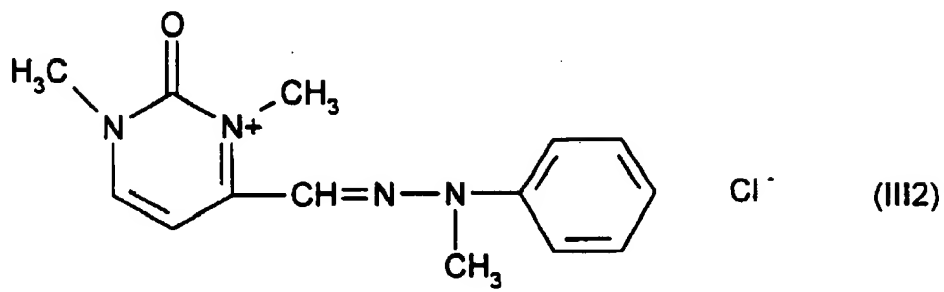
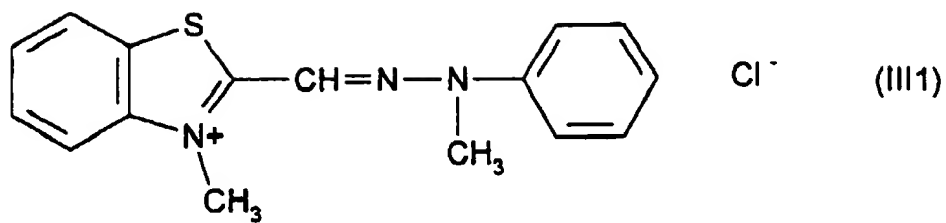


; and



<sup>12</sup>  
43

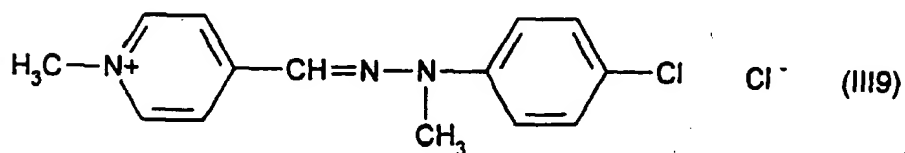
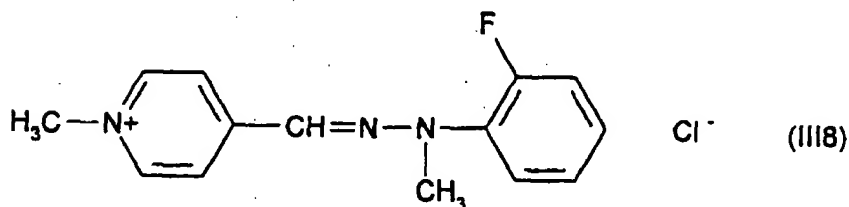
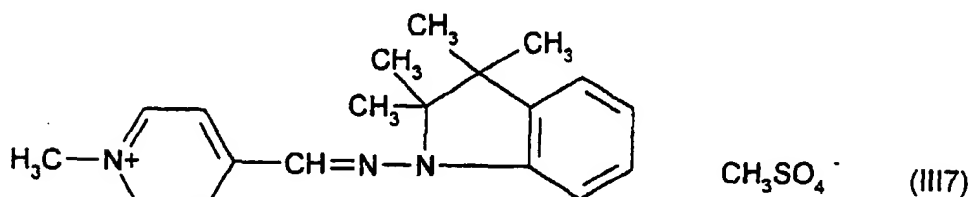
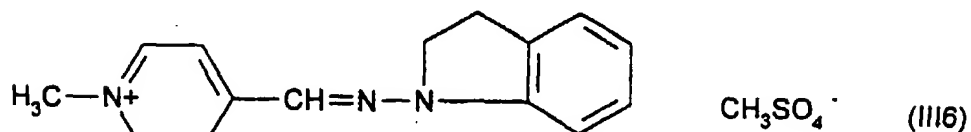
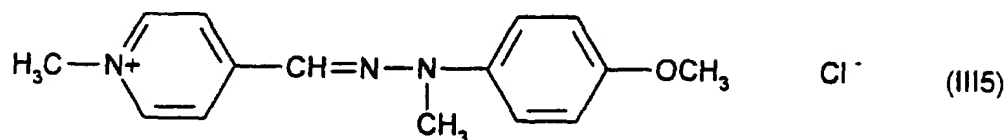
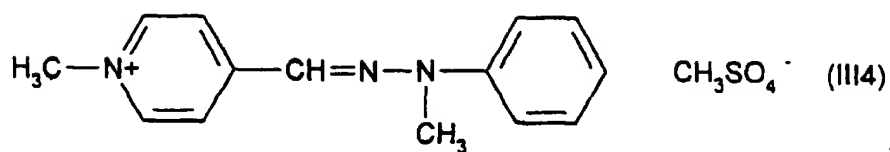
The composition according to Claim 1, wherein said at least one cationic direct dye of formula (III) is chosen from compounds of formulae (III1) to (III18) below:



000020 50761260

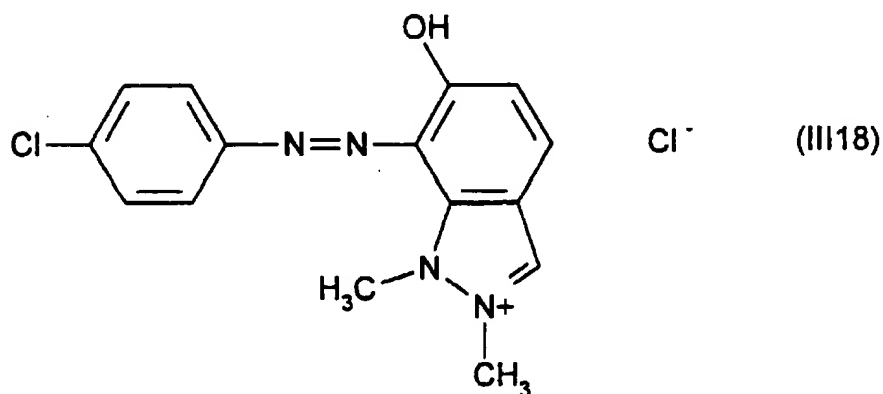
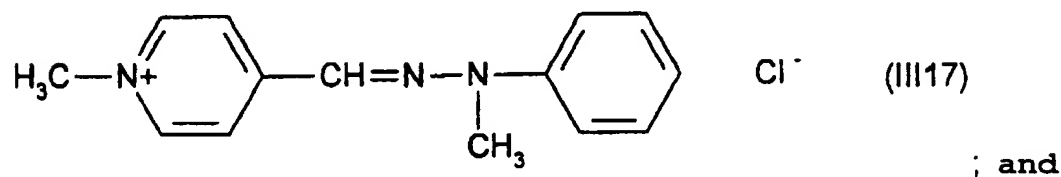
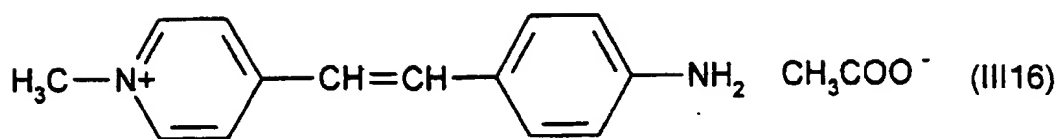
LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N.W.  
WASHINGTON, D. C. 20005  
202-408-4000



668020-50761C.60





13

12

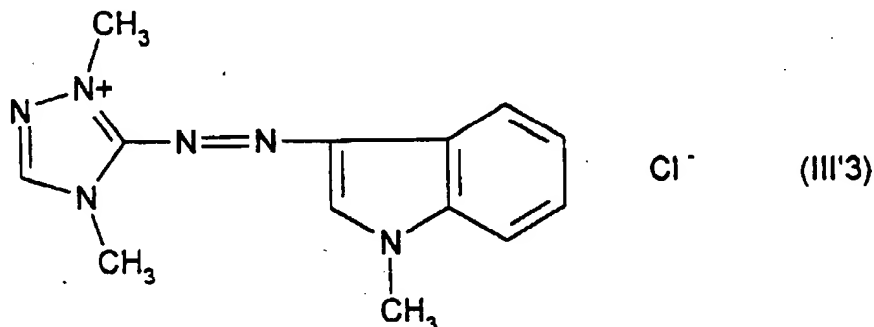
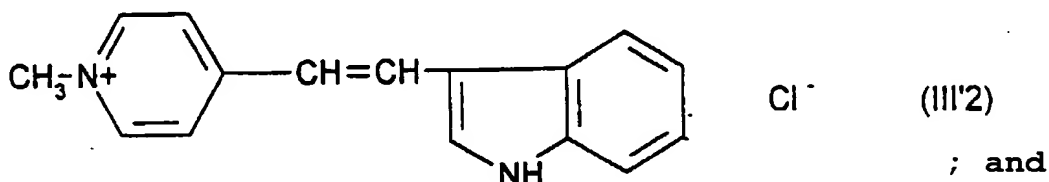
14. The composition according to Claim 13, wherein said at least one cationic direct dye of formula (III) is chosen from compounds of formulae (III4), (III5) and (III13).

15.

(III'3) below:



**“五·三〇”事件**



<sup>15</sup>  
16. The composition according to Claim 1, wherein said at least one cationic direct dye of formula (I), (II), (III) or (III') is present in an amount ranging from 0.001 to 10% by weight relative to the total weight of the composition.

<sup>16</sup>  
<sup>15</sup>  
17. The composition according to Claim ~~16~~<sup>15</sup>, wherein said at least one cationic direct dye of formula (I), (II), (III) or (III') is present in an amount ranging from 0.005 to 5% by weight relative to the total weight of the composition.

<sup>17</sup>  
18. The composition according to Claim ~~7~~<sup>1</sup>, wherein said at least one thickening polymer is chosen from hydroxyalkylcelluloses.

<sup>18</sup>  
<sup>17</sup>  
19. The composition according to Claim ~~18~~<sup>17</sup>, wherein said hydroxyalkylcelluloses are chosen from hydroxyethylcelluloses and hydroxypropylcelluloses.

<sup>19</sup>  
20. The composition according to Claim <sup>1</sup>~~7~~, wherein said at least one thickening polymer is chosen from carboxyalkylcelluloses.

<sup>20</sup>  
~~21~~ The composition according to Claim <sup>19</sup>~~20~~, wherein said carboxyalkylcelluloses are carboxymethylcelluloses.

<sup>21</sup>  
22. The composition according to Claim 1, wherein said at least one thickening polymer is a nonionic guar gum modified with C<sub>1</sub>-C<sub>6</sub> hydroxyalkyl groups.

<sup>22</sup>  
23. The composition according to Claim <sup>21</sup>~~22~~, wherein said hydroxyalkyl groups are chosen from hydroxymethyl, hydroxyethyl, hydroxypropyl and hydroxybutyl groups.

<sup>23</sup>  
24. The composition according to Claim <sup>21</sup>~~22~~, wherein said nonionic guar gum has a degree of hydroxyalkylation ranging from 0.4 to 1.2.

<sup>24</sup>  
25. The composition according to Claim 1, wherein said at least one thickening polymer is present in an amount ranging from 0.01 to 10% by weight relative to the total weight of the composition.

<sup>25</sup>  
26. The composition according to Claim <sup>24</sup>~~25~~, wherein said at least one thickening polymer is present in an amount ranging from 0.1 to 5% by weight relative to the total weight of the composition.

<sup>26</sup>  
27. The composition according to Claim 1, wherein said composition further comprises a support chosen from water and a mixture of water and at

00349105-000000



least one organic solvent.

<sup>27</sup>  
28. The composition according to Claim 1, wherein said composition has a pH ranging from 2 to 11.

<sup>28</sup> <sup>2 7</sup>  
29. The composition according to Claim ~~28~~, wherein said composition has a pH ranging from 5 to 10.

*Sub  
a2*  
30. The composition according to Claim 1, wherein said composition further comprises at least one additional direct dye.

<sup>30</sup> <sup>29</sup>  
31. The composition according to Claim ~~30~~, wherein said at least one additional direct dye is chosen from nitrobenzene dyes, anthraquinone dyes, naphthaquinone dyes, triarylmethane dyes, xanthene dyes and azo dyes.

<sup>31</sup>  
32. The composition according to Claim 1, wherein said composition further comprises at least one oxidation base chosen from para-phenylenediamines, bis(phenyl)alkylenediamines, para-aminophenols, ortho-aminophenols and heterocyclic bases.

<sup>32</sup> <sup>31</sup>  
33. The composition according to Claim ~~32~~, wherein said at least one oxidation base is present in an amount ranging from 0.0005 to 12% by weight relative to the total weight of the dye composition.

<sup>33</sup> <sup>32</sup>  
34. The composition according to Claim ~~33~~, wherein said at least one oxidation base is present in an amount ranging from 0.005 to 6% by weight relative to the total weight of the dye composition.

34  
35

31

The composition according to Claim ~~32~~, wherein said composition further comprises at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols and heterocyclic couplers.

35

34

The composition according to Claim ~~35~~, wherein said at least one coupler is present in an amount ranging from 0.0001 to 10% by weight relative to the total weight of the dye composition.

36

35

The composition according to Claim ~~36~~, wherein said at least one coupler is present in an amount ranging from 0.005 to 5% by weight relative to the total weight of the dye composition.

37

31

The composition according to Claim ~~32~~, wherein said composition further comprises at least one oxidizing agent.

38

37

The composition according to Claim ~~38~~, wherein said at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts and enzymes.

39

38

The composition according to Claim ~~39~~, wherein said persalts are chosen from perborates and persulphates.

40

38

The composition according to Claim ~~39~~, wherein said ~~enzymes~~ <sup>enzymes</sup> are chosen from peroxidases, lactases, and two-electron oxidoreductases.

41

The composition according to Claim 1, wherein said composition is present in an amount sufficient for lightening dyeing direct dyeing.

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

<sup>42</sup>  
~~43.~~ The composition according to Claim 1, wherein said composition further comprises at least one oxidizing agent.

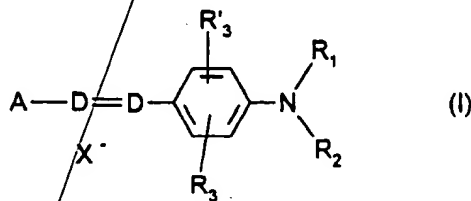
<sup>43</sup>  
~~44.~~ The composition according to Claim 1, wherein said composition is in a form chosen from a liquid, a shampoo, a cream and a gel.

45. A process for dyeing keratin fibers, comprising applying a composition for the oxidation dyeing of keratin fibers to said keratin fibers and developing for a period of time sufficient to achieve the desired coloration, wherein said composition comprises:

(i) at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below, and

(ii) at least one thickening polymer;

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from a

hydrogen atom; a 4'-aminophenyl radical; and C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH<sub>2</sub> radicals; or

R<sub>1</sub> and R<sub>2</sub> form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

R<sub>3</sub> and R'<sub>3</sub>, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub> alkoxy radicals and acetyloxy radicals,

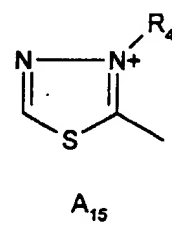
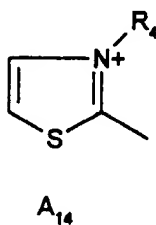
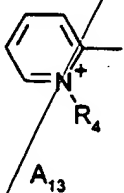
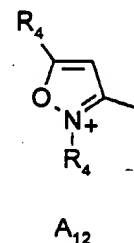
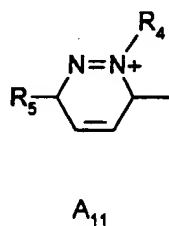
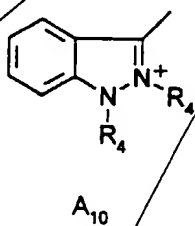
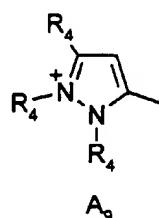
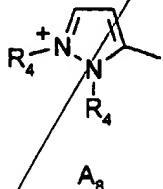
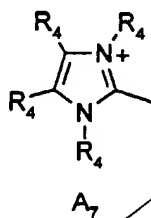
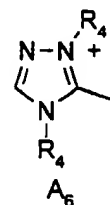
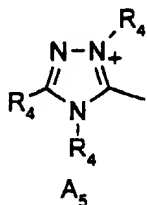
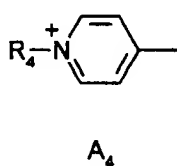
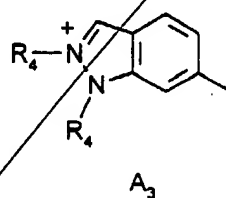
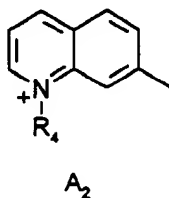
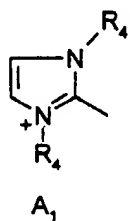
X<sup>-</sup> is chosen from anions,

A is chosen from structures A<sub>1</sub> to A<sub>19</sub> below:

668020-5016152  
Sub A4 cat 18

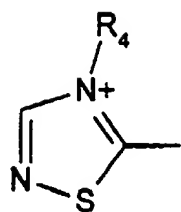
LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

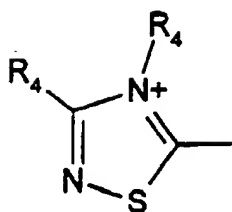


05725.0441-00000

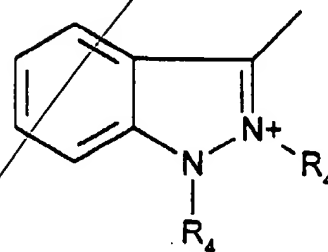
*Handwritten signature*



A<sub>16</sub>

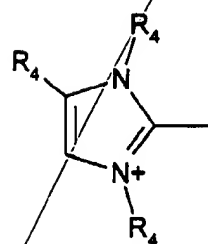


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

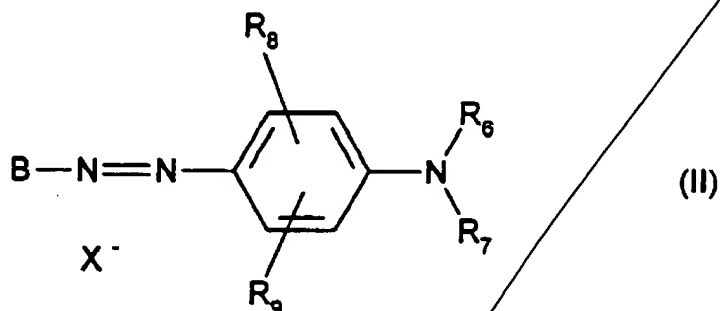
R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

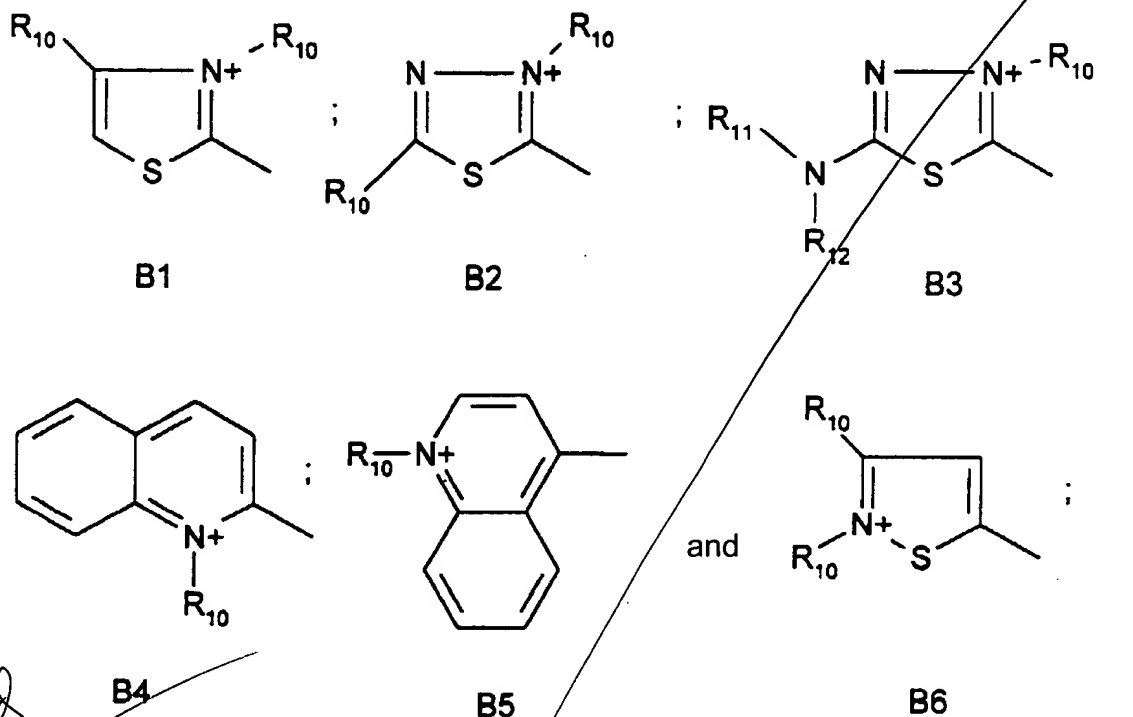
$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

B is chosen from structures  $B_1$  to  $B_6$  below:

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



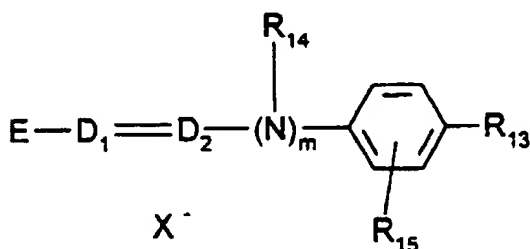
in which:

$R_{10}$  is chosen from  $C_1$ - $C_4$  alkyl radicals, and

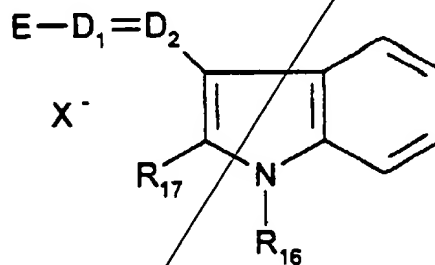
$R_{11}$  and  $R_{12}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:





(III)



(III')

in which:

$\text{R}_{13}$  is chosen from a hydrogen atom,  $\text{C}_1\text{-C}_4$  alkoxy radicals, halogen atoms and an amino radical,

$\text{R}_{14}$  is chosen from a hydrogen atom,  $\text{C}_1\text{-C}_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one to radical chosen from  $\text{C}_1\text{-C}_4$  alkyl radicals,

$\text{R}_{15}$  is chosen from a hydrogen atom and halogen atoms,

$\text{R}_{16}$  and  $\text{R}_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $\text{C}_1\text{-C}_4$  alkyl radicals,

$\text{D}_1$  and  $\text{D}_2$ , which may be identical or different, are chosen from a nitrogen atom and a  $-\text{CH}$  group,

$m$  is 0 or 1,

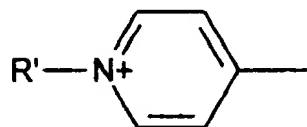
wherein when  $\text{R}_{13}$  is an unsubstituted amino group,  $\text{D}_1$  and  $\text{D}_2$  are both a

pub 24 conts

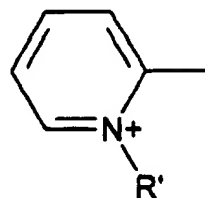
-CH group and m is 0,

X<sup>-</sup> is chosen from anions,

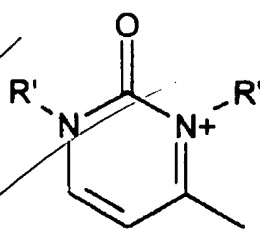
E is chosen from structures E<sub>1</sub> to E<sub>8</sub> below:



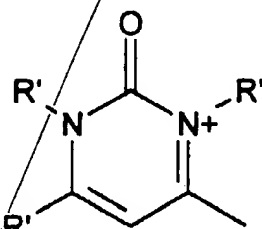
E1



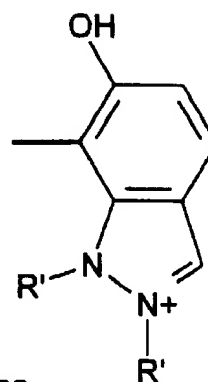
E2



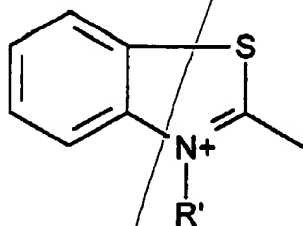
E3



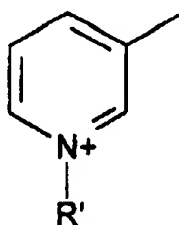
E4



E5



E6



E7

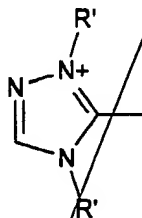
000020-50764260

Sub  
A4  
contg

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

and

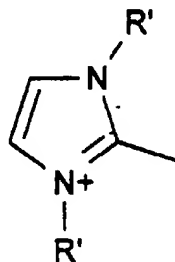


E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be

further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

and

- and wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

45

46. The process according to Claim 45, wherein said process further

comprises rinsing said fibers, then drying said fibers.

0000020150767E60

*Sub  
Accts*

46

47.

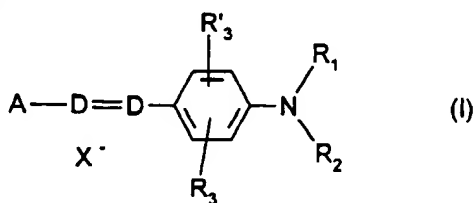
44

45

The process according to Claim 45, wherein said process further comprises rinsing said fibers, washing said fibers with shampoo, a second rinsing of said fibers and drying of said fibers.

48. A process for dyeing keratin fibers, comprising separately storing a first composition, separately storing a second composition, thereafter mixing said first and second compositions, applying said mixture to said fibers, and developing for a period of time sufficient to achieve <sup>a</sup>the desired coloration, wherein said first composition comprises at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below, at least one thickening polymer and at least one oxidation base,

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

668040-50761660

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

$R_1$  and  $R_2$ , which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and  $C_1$ - $C_4$  alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and - $NH_2$  radicals; or

$R_1$  and  $R_2$  form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl radicals;

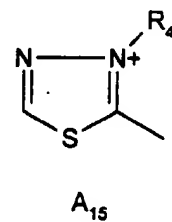
$R_3$  and  $R'_3$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and acetyloxy radicals,

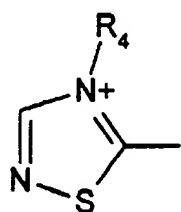
$X^-$  is chosen from anions,

A is chosen from structures  $A_1$  to  $A_{19}$  below:

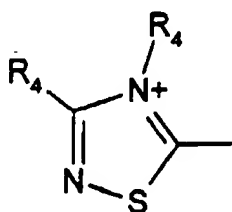
0034905-50761560

*Handwritten signature/initials*

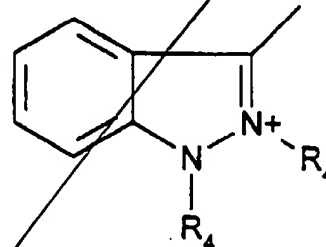




A<sub>16</sub>

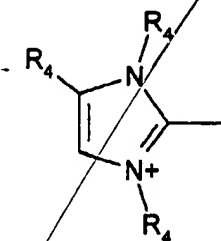


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

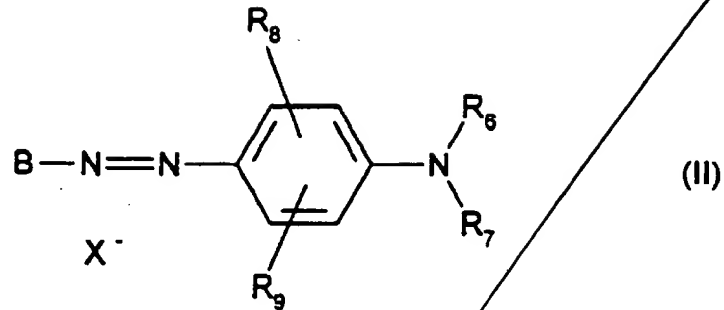
wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

05725.0441-00000

compounds of formula:



in which:

$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

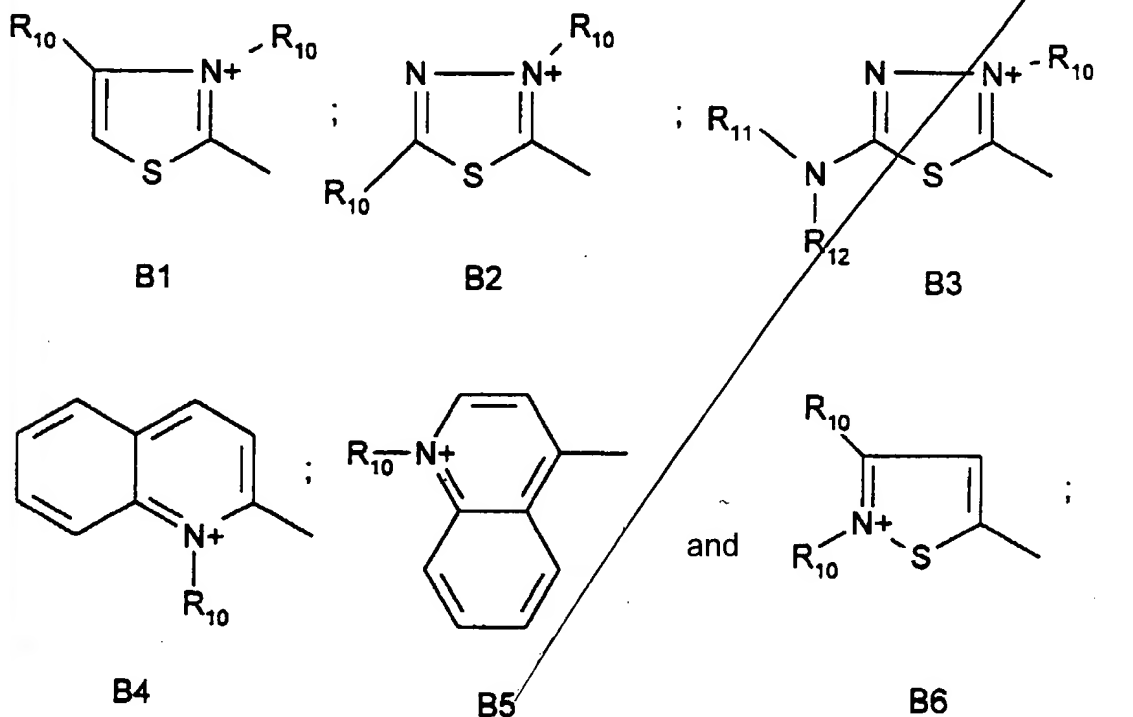
$X^-$  is chosen from anions,

B is chosen from structures  $B_1$  to  $B_6$  below:

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000





in which:

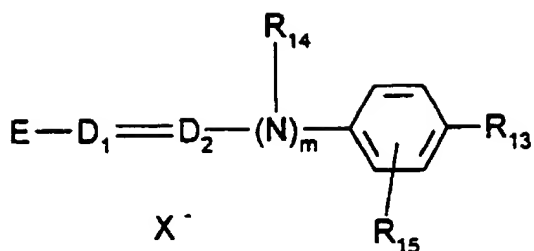
$R_{10}$  is chosen from  $C_1$ - $C_4$  alkyl radicals, and

$R_{11}$  and  $R_{12}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals;

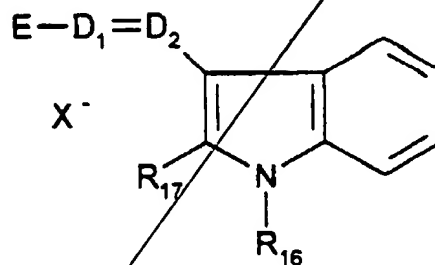
(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:

05725.0441-00000

Pub  
23



(III)



(III')

in which:

$R_{13}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkoxy radicals, halogen atoms and an amino radical,

$R_{14}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl radicals,

$R_{15}$  is chosen from a hydrogen atom and halogen atoms,

$R_{16}$  and  $R_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$D_1$  and  $D_2$ , which may be identical or different, are chosen from a nitrogen atom and a  $-CH$  group,

$m$  is 0 or 1,

wherein when  $R_{13}$  is an unsubstituted amino group,  $D_1$  and  $D_2$  are both a

000020 50704660

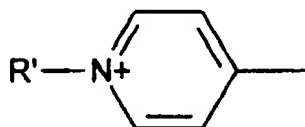
LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

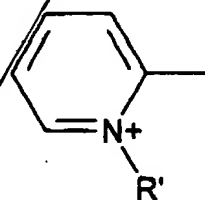
-CH group and m is 0,

X<sup>-</sup> is chosen from anions,

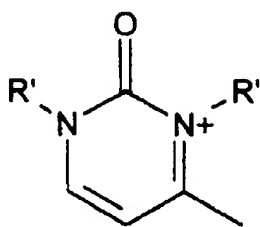
E is chosen from structures E<sub>1</sub> to E<sub>8</sub> below:



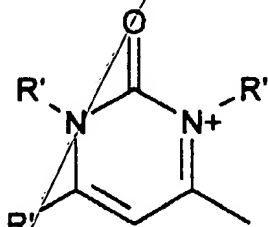
E1



E2



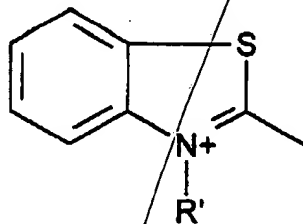
E3



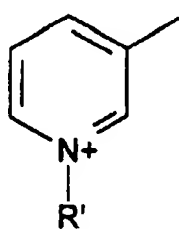
E4



E5



E6

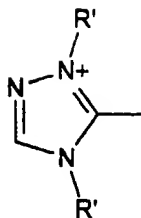


E7

668040-50764E60

*Ref 23*

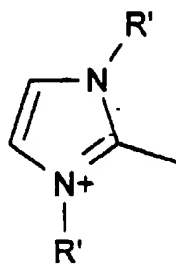
and



E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

- and wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit; and

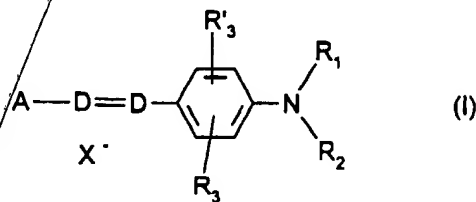
- wherein said second composition comprises at least one oxidizing agent.

49. A process for dyeing keratin fibers, comprising separately storing a first composition,

665022 "SOT 6th 60"

separately storing a second composition,  
thereafter mixing said first and second compositions,  
applying said mixture to said fibers, and  
developing for a period of time sufficient to achieve <sup>a</sup>the desired coloration,  
- wherein said first composition comprises at least one oxidation base, and  
at least one cationic direct dye chosen from compounds of formulae (I), (II), (III)  
and (III') below:

(a) wherein said compounds of formula (I) are chosen from  
compounds of formula:



in which.

D is chosen from a nitrogen atom and a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from a  
hydrogen atom; a 4'-aminophenyl radical; and C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can  
optionally be substituted with a radical chosen from -CN, -OH and -NH<sub>2</sub> radicals;

or

R<sub>1</sub> and R<sub>2</sub> form, with each other or with a carbon atom of the benzene ring of

665020-5076660

formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

R<sub>3</sub> and R'<sub>3</sub>, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub> alkoxy radicals and acetyloxy radicals,

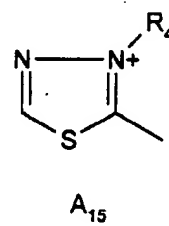
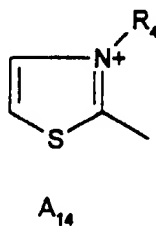
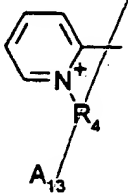
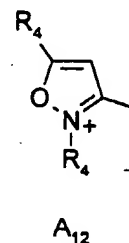
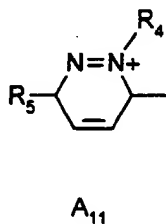
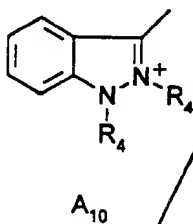
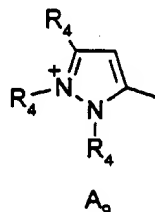
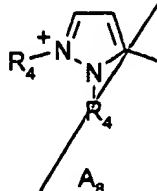
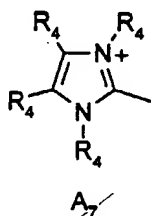
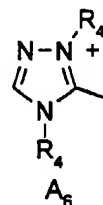
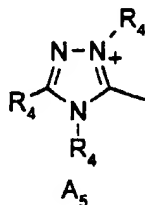
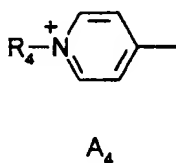
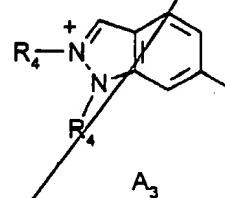
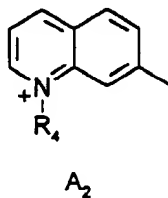
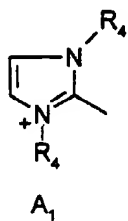
X<sup>-</sup> is chosen from anions.

A is chosen from structures A<sub>1</sub> to A<sub>19</sub> below:

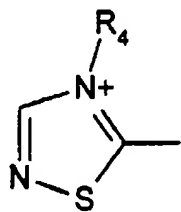
668020" 50767E66

LAW OFFICES

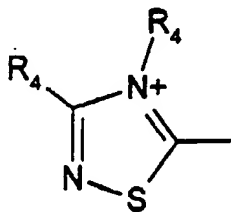
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



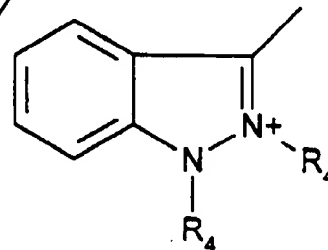
666010-50767660



A<sub>16</sub>

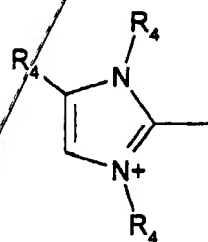


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

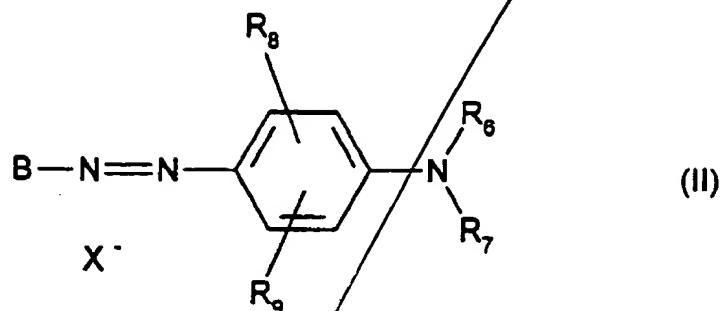
(b) wherein said compounds of formula (II) are chosen from

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



compounds of formula:



in which:

$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

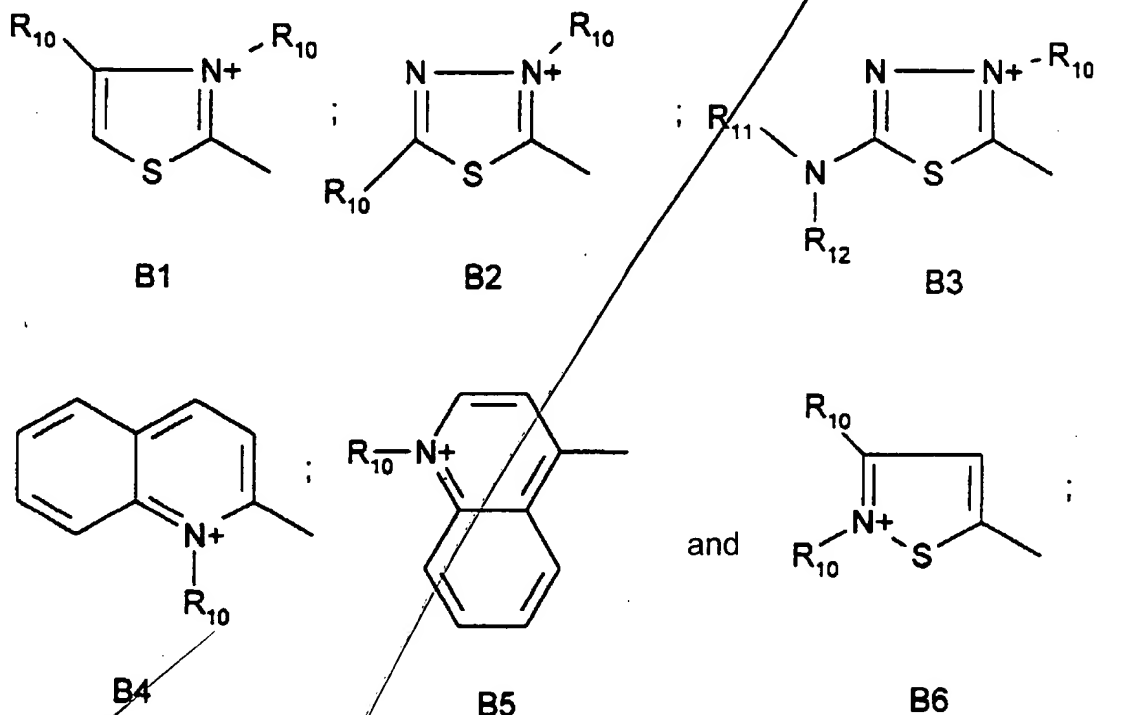
$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

B is chosen from structures  $B_1$  to  $B_6$  below:

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



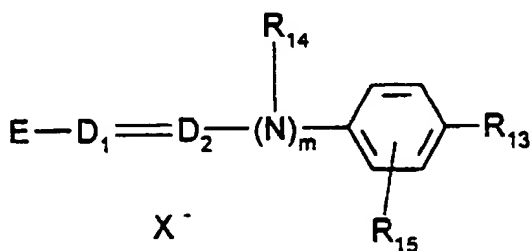
in which:

$R_{10}$  is chosen from  $C_1$ - $C_4$  alkyl radicals, and

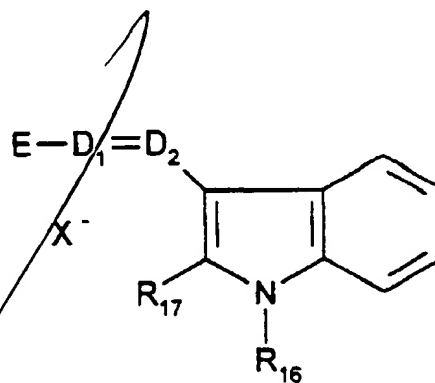
$R_{11}$  and  $R_{12}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:

05725.0441-00000  
Sub  
C3



(III)



(III')

in which:

$R_{13}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkoxy radicals, halogen atoms and an amino radical,

$R_{14}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl radicals,

$R_{15}$  is chosen from a hydrogen atom and halogen atoms,

$R_{16}$  and  $R_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$D_1$  and  $D_2$ , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

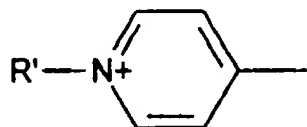
$m$  is 0 or 1,

wherein when  $R_{13}$  is an unsubstituted amino group,  $D_1$  and  $D_2$  are both a

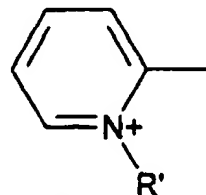
-CH group and m is 0,

X<sup>-</sup> is chosen from anions,

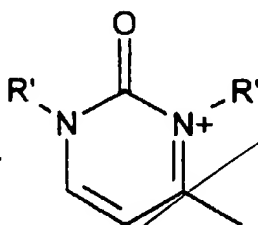
E is chosen from structures E<sub>1</sub> to E<sub>8</sub> below:



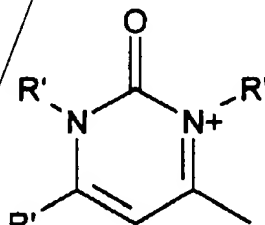
E1



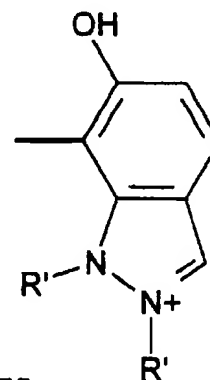
E2



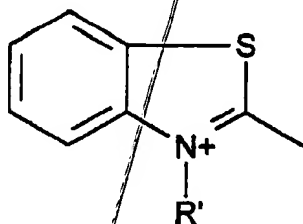
E3



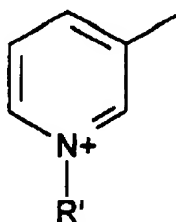
E4



E5



E6

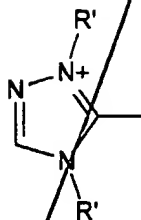


E7

05725.0441-00000

*Pub*

and

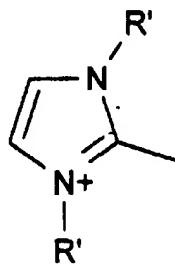


E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be further chosen from structure E9 below:

E9



in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

and

- wherein said second composition comprises at least one oxidizing agent and at least one thickening polymer,

- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

6650201 507 676 60

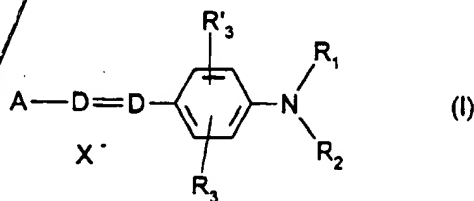
Sub  
E3

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

50. A process for dyeing keratin fibers, comprising  
separately storing a first composition,  
separately storing a second composition,  
thereafter mixing said first and second compositions,  
applying said mixture to said fibers, and  
developing for a period of time sufficient to achieve <sup>a</sup>the desired coloration,  
wherein said first composition comprises at least one cationic direct dye  
chosen from compounds of formulae (I), (II), (III) and (III') below and at least one  
thickening polymer:

(a) wherein said compounds of formula (I) are chosen from  
compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from a  
hydrogen atom; a 4'-aminophenyl radical; and C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can  
optionally be substituted with a radical chosen from -CN, -OH and -NH<sub>2</sub> radicals;

or

$R_1$  and  $R_2$  form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl radicals;

$R_3$  and  $R'_3$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and acetyloxy radicals,

$X^-$  is chosen from anions,

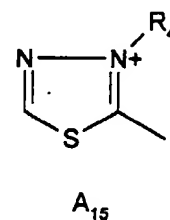
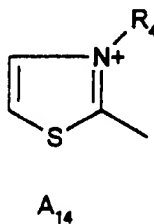
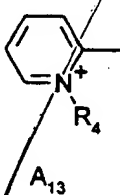
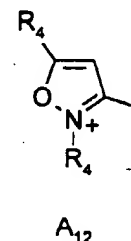
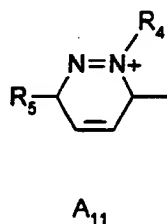
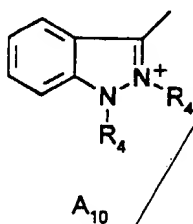
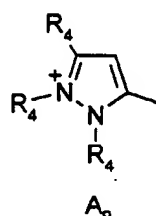
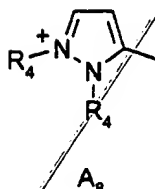
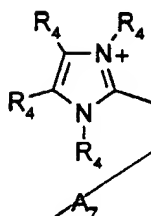
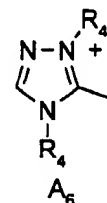
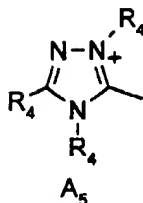
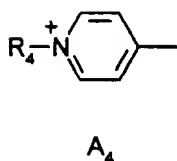
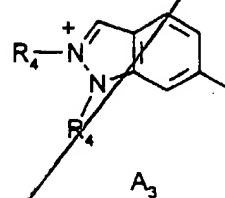
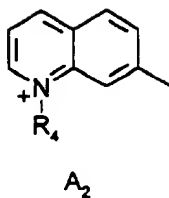
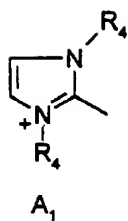
A is chosen from structures  $A_1$  to  $A_{19}$  below:

Sub  
C3

668020-3376850

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

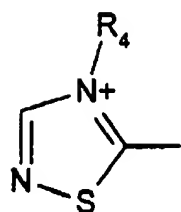


Pub  
C3

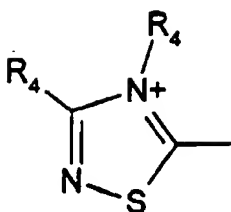
LAW OFFICES

FINNEGAN, HENDERSON,  
 FARABOW, GARRETT,  
 & DUNNER, L.L.P.  
 1300 I STREET, N. W.  
 WASHINGTON, D. C. 20005  
 202-408-4000

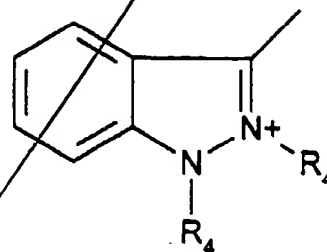




A<sub>16</sub>

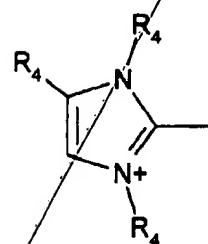


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

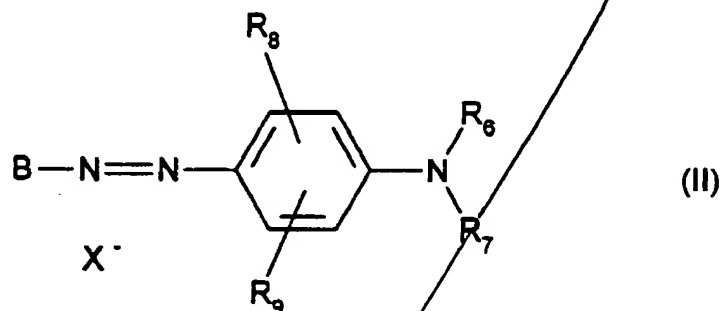
R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

660023 10/1/00

*Sub C3*

compounds of formula:



in which:

$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

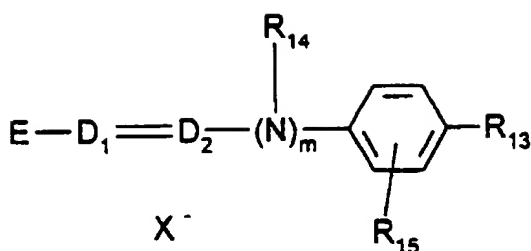
$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

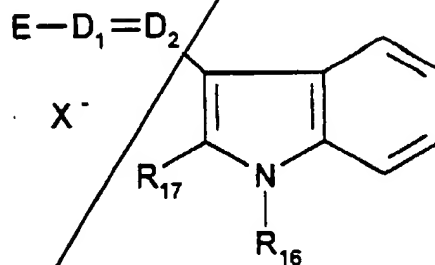
B is chosen from structures  $B_1$  to  $B_6$  below:



(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

$\text{R}_{13}$  is chosen from a hydrogen atom,  $\text{C}_1\text{-C}_4$  alkoxy radicals, halogen atoms and an amino radical,

$\text{R}_{14}$  is chosen from a hydrogen atom,  $\text{C}_1\text{-C}_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from  $\text{C}_1\text{-C}_4$  alkyl radicals,

$\text{R}_{15}$  is chosen from a hydrogen atom and halogen atoms,

$\text{R}_{16}$  and  $\text{R}_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $\text{C}_1\text{-C}_4$  alkyl radicals,

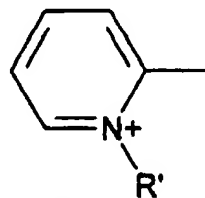
$\text{D}_1$  and  $\text{D}_2$ , which may be identical or different, are chosen from a nitrogen atom and a  $-\text{CH}$  group,

$m$  is 0 or 1,

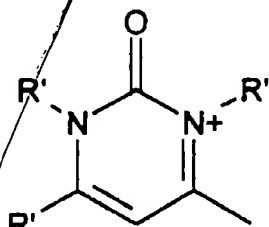
wherein when  $\text{R}_{13}$  is an unsubstituted amino group,  $\text{D}_1$  and  $\text{D}_2$  are both a

05725/0441-00000

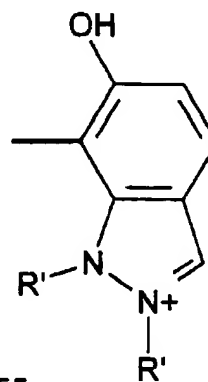
E is chosen from structures  $E_1$  to  $E_8$  below:



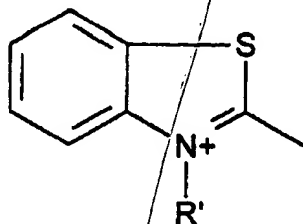
E2



**E4**



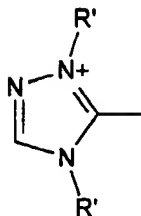
E5



A chemical structure of a pyridinium ring. The nitrogen atom at the bottom of the ring is labeled  $N^+$  and is bonded to a substituent  $R'$ . A bond extends from the carbon atom at the 4-position of the ring.

**E7**

and

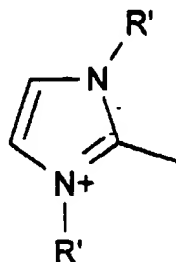


E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be

further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit; and
- wherein said second composition comprises at least one oxidizing agent.

51. A process for dyeing keratin fibers, comprising

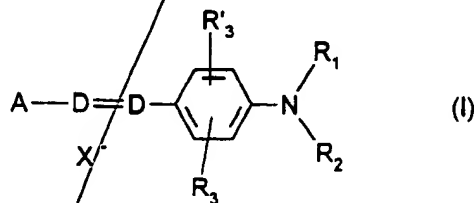
separately storing a first composition, -

668020-50767E60

*sub  
C3*

separately storing a second composition,  
thereafter mixing said first and second compositions,  
applying said mixture to said fibers, and  
developing for a period of time sufficient to achieve the desired coloration,  
- wherein said first composition comprises at least one cationic direct dye  
chosen from compounds of formulae (I), (II), (III) and (III') below:

(a) wherein said compounds of formula (I) are chosen from  
compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from a  
hydrogen atom; a 4'-aminophenyl radical; and C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can  
optionally be substituted with a radical chosen from -CN, -OH and -NH<sub>2</sub> radicals;  
or

R<sub>1</sub> and R<sub>2</sub> form, with each other or with a carbon atom of the benzene ring of  
formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen

and nitrogen, which can be substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

R<sub>3</sub> and R'<sub>3</sub>, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub> alkoxy radicals and acetyloxy radicals,

X<sup>-</sup> is chosen from anions,

A is chosen from structures A<sub>1</sub> to A<sub>19</sub> below:

660020-50761660

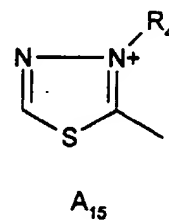
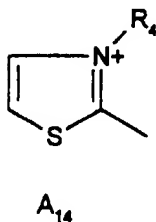
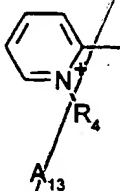
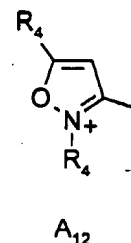
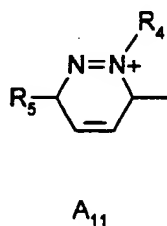
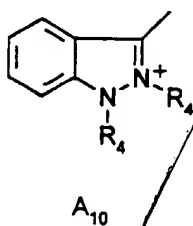
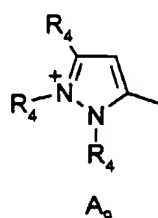
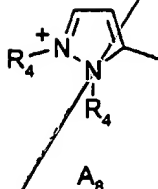
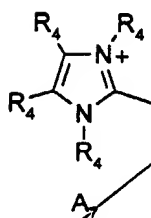
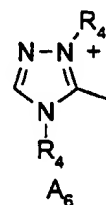
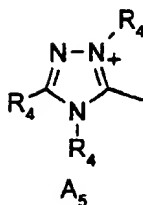
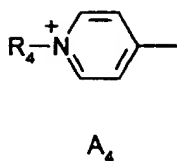
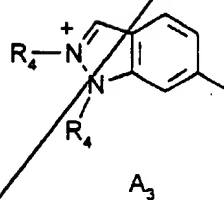
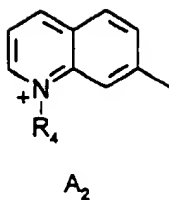
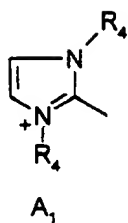
Sub  
C<sub>3</sub>

✓

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



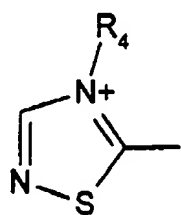


666020-52464660

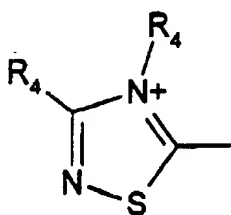
*Pub 13*

LAW OFFICES

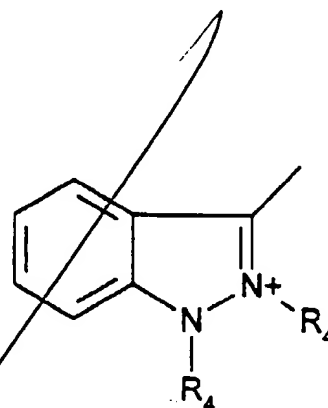
FINNEGAN, HENDERSON,  
 FARABOW, GARRETT,  
 & DUNNER, L.L.P.  
 1300 I STREET, N.W.  
 WASHINGTON, D. C. 20005  
 202-408-4000



A<sub>16</sub>

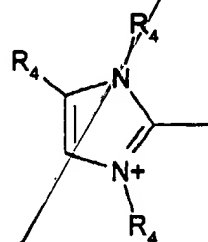


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

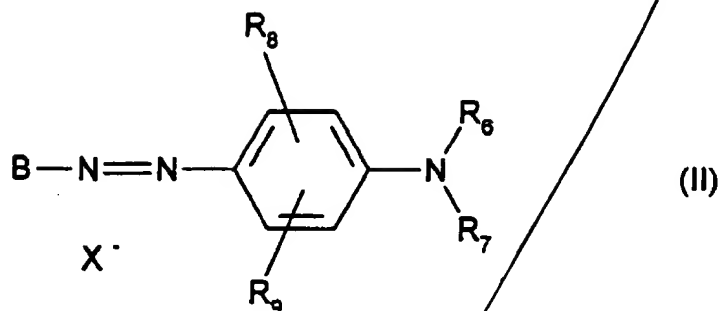
wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

05725.0441-00000  
 Sub  
 C3

compounds of formula:



in which:

$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

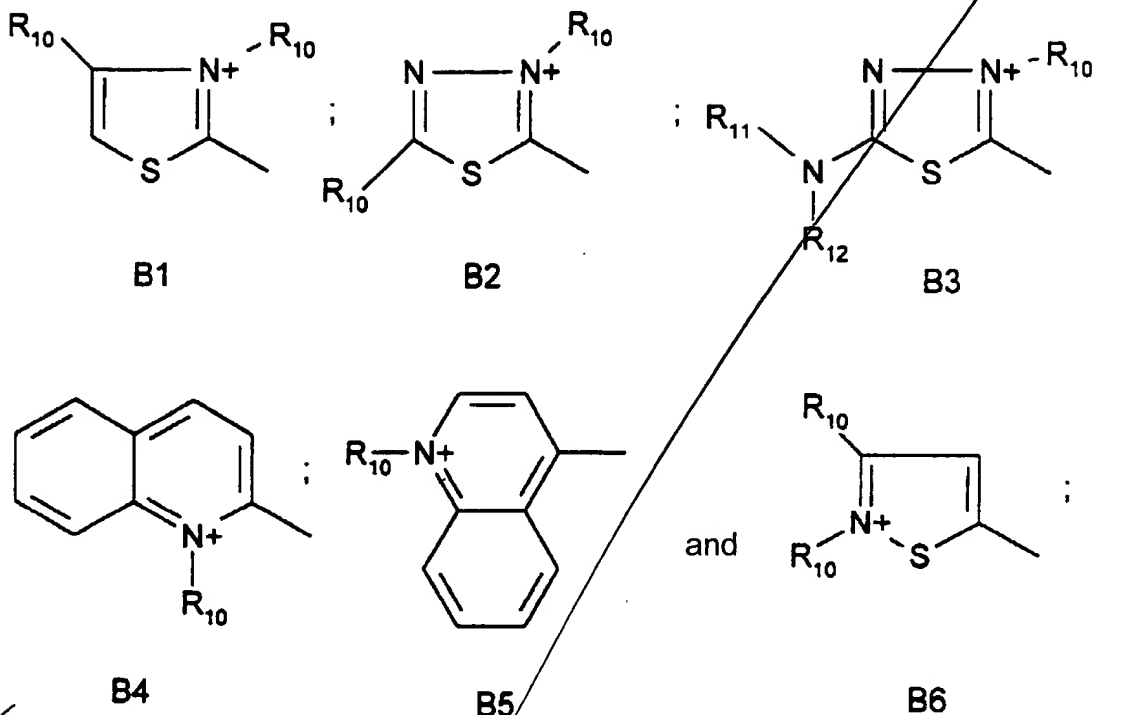
$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

B is chosen from structures  $B_1$  to  $B_6$  below:

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

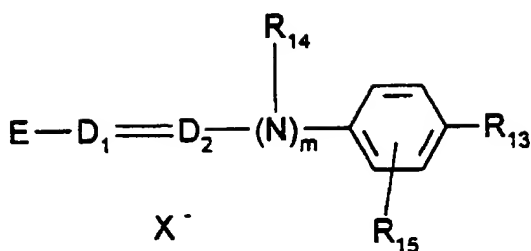


in which:

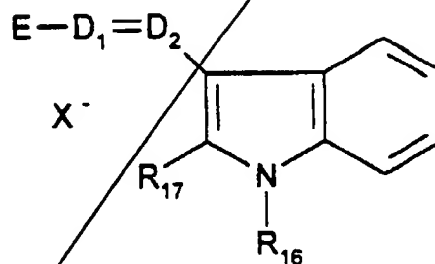
$R_{10}$  is chosen from  $C_1$ - $C_4$  alkyl radicals, and

$R_{11}$  and  $R_{12}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

$R_{13}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkoxy radicals, halogen atoms and an amino radical,

$R_{14}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl radicals,

$R_{15}$  is chosen from a hydrogen atom and halogen atoms,

$R_{16}$  and  $R_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$D_1$  and  $D_2$ , which may be identical or different, are chosen from a nitrogen atom and a  $-CH$  group,

$m$  is 0 or 1,

wherein when  $R_{13}$  is an unsubstituted amino group,  $D_1$  and  $D_2$  are both a

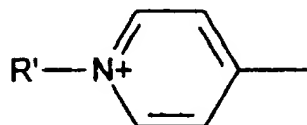
660020-50764660

Sub  
C3

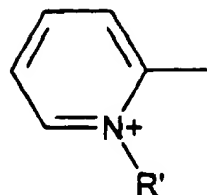
-CH group and m is 0,

X<sup>-</sup> is chosen from anions,

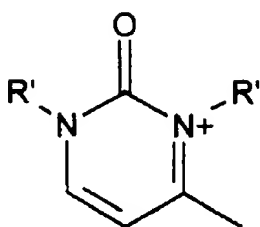
E is chosen from structures E<sub>1</sub> to E<sub>8</sub> below:



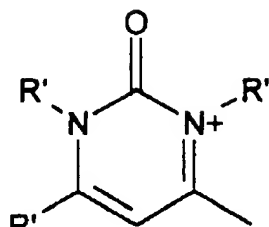
E1



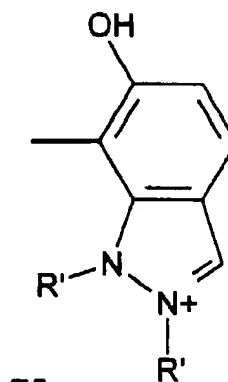
E2



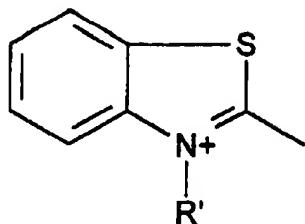
E3



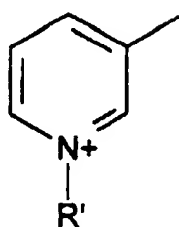
E4



E5



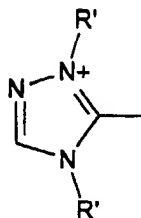
E6



E7

668020 50764E60

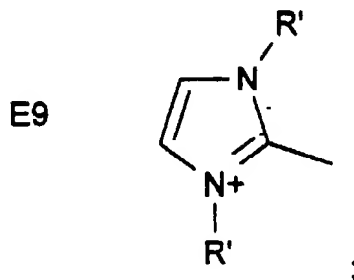
and



E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

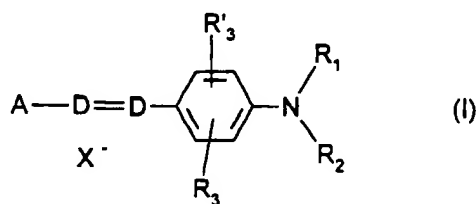
- wherein said second composition comprises at least one oxidizing agent and at least one thickening polymer,
- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

52. A multi-compartment dyeing kit, comprising at least two separate

compartments, wherein a first compartment contains a first composition and a second compartment contains a second composition, -

- wherein said first composition comprises at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below, at least one thickening polymer and at least one oxidation base:

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

$\text{R}_1$  and  $\text{R}_2$ , which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and  $\text{C}_1$ - $\text{C}_4$  alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and - $\text{NH}_2$  radicals;

or

$\text{R}_1$  and  $\text{R}_2$  form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from

05725.0441-00000



C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

R<sub>3</sub> and R'<sub>3</sub>, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub> alkoxy radicals and acetyloxy radicals,

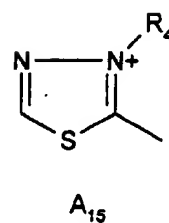
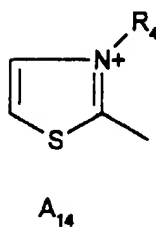
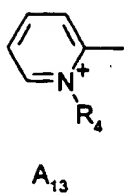
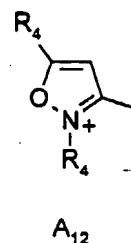
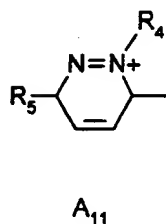
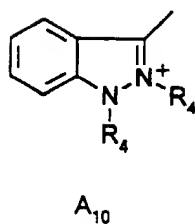
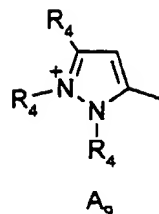
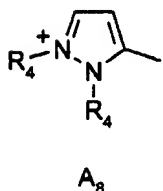
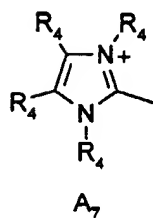
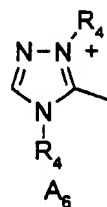
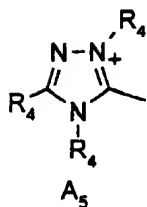
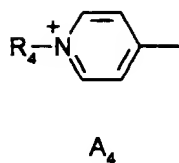
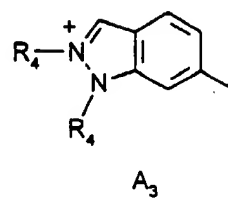
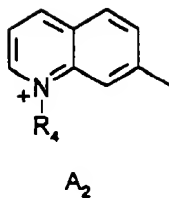
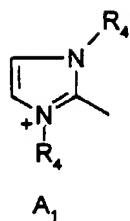
X<sup>-</sup> is chosen from anions,

A is chosen from structures A<sub>1</sub> to A<sub>19</sub> below:

665020-5076HE60

LAW OFFICES

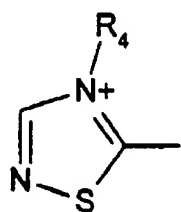
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



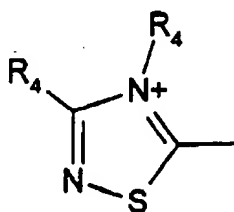
00349405-00000

LAW OFFICES

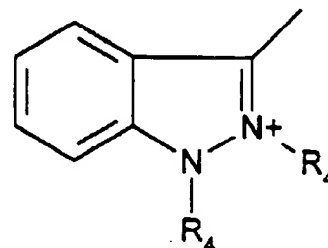
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



A<sub>16</sub>

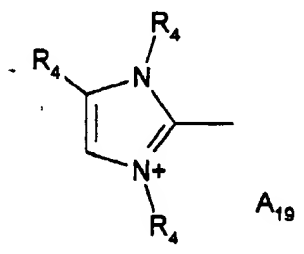


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

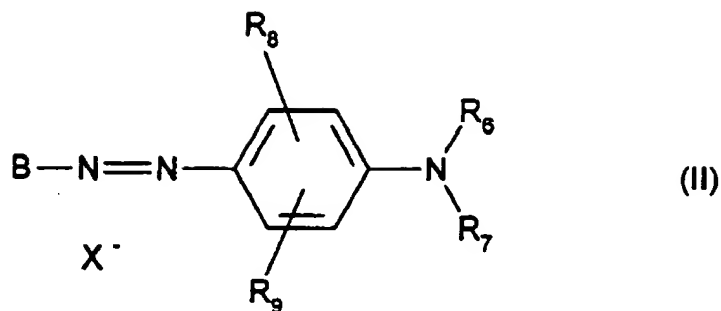
R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

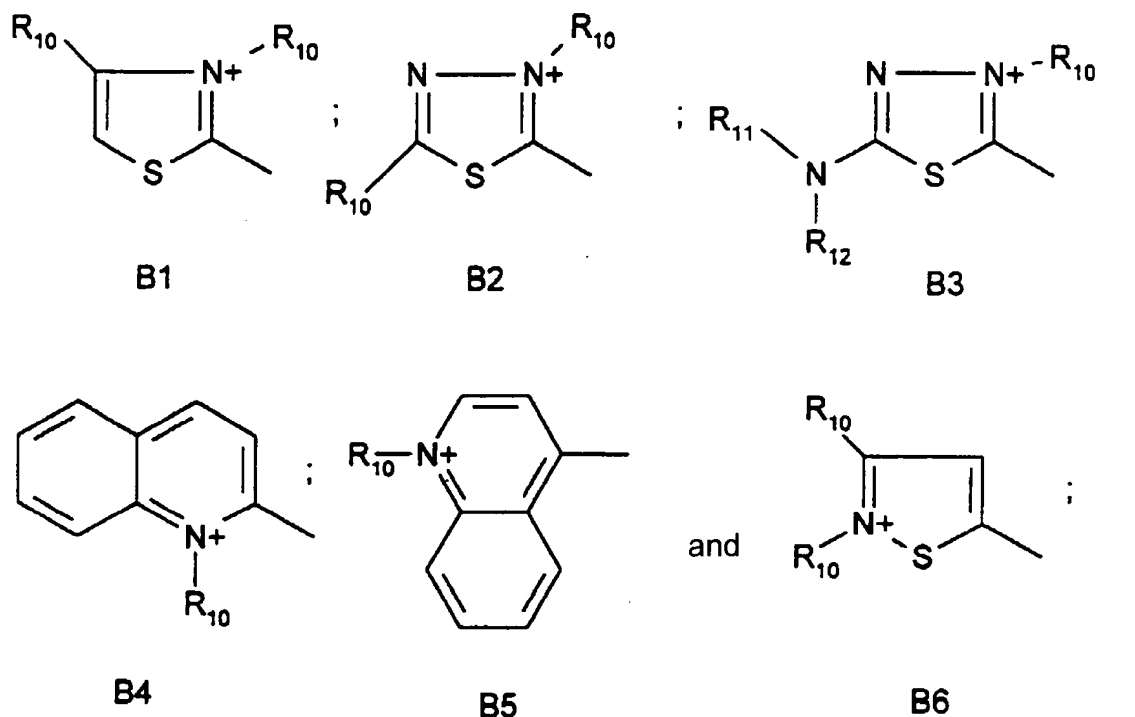
$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

B is chosen from structures  $B_1$  to  $B_6$  below:

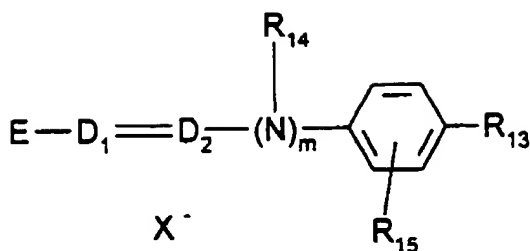


in which:

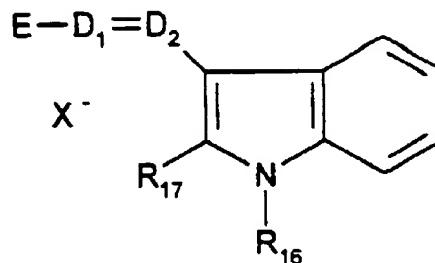
$R_{10}$  is chosen from  $C_1$ - $C_4$  alkyl radicals, and

$R_{11}$  and  $R_{12}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

$R_{13}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkoxy radicals, halogen atoms and an amino radical,

$R_{14}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl radicals,

$R_{15}$  is chosen from a hydrogen atom and halogen atoms,

$R_{16}$  and  $R_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$D_1$  and  $D_2$ , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

$m$  is 0 or 1,

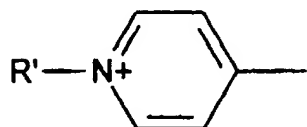
wherein when  $R_{13}$  is an unsubstituted amino group,  $D_1$  and  $D_2$  are both a

669029-50761650

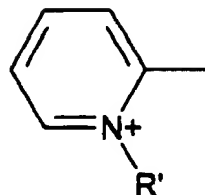
-CH group and m is 0,

X<sup>-</sup> is chosen from anions,

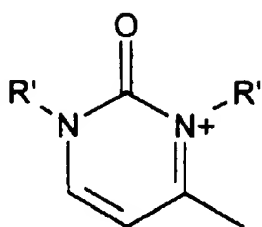
E is chosen from structures E<sub>1</sub> to E<sub>8</sub> below:



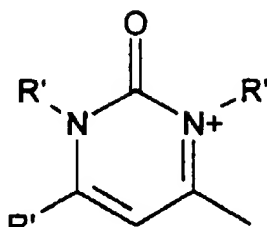
E1



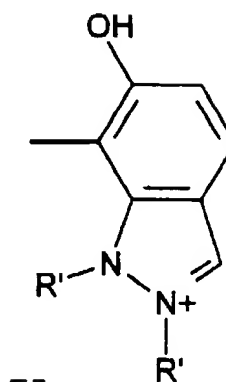
E2



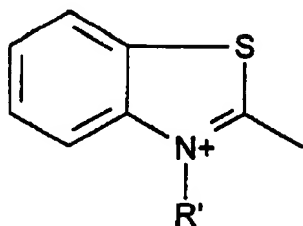
E3



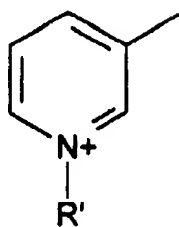
E4



E5



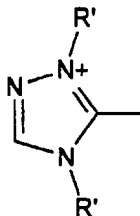
E6



E7

665040-50767E60

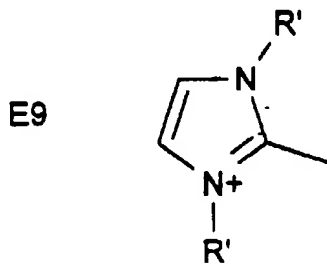
and



E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit; and
- wherein said second composition comprises at least one oxidizing agent.

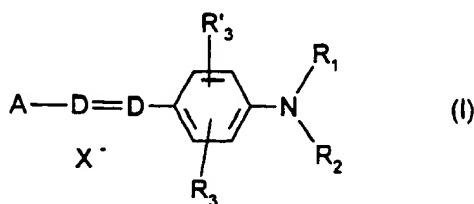
53. A multi-compartment dyeing kit, comprising at least two separate



compartments, wherein a first compartment contains a first composition and a second compartment contains a second composition,

- wherein said first composition comprises at least one oxidation base and at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below:

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH<sub>2</sub> radicals;

or

R<sub>1</sub> and R<sub>2</sub> form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from

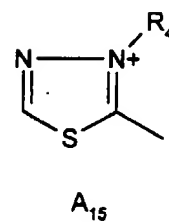
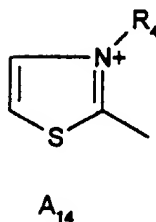
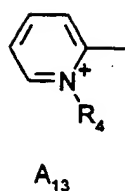
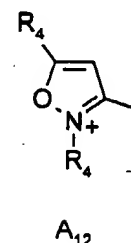
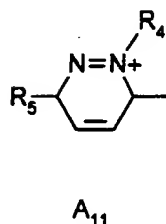
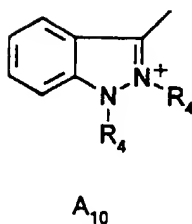
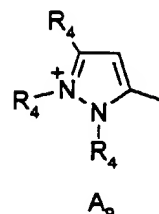
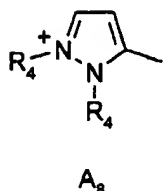
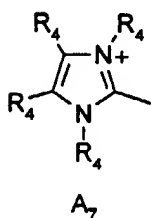
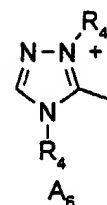
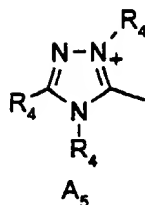
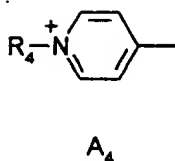
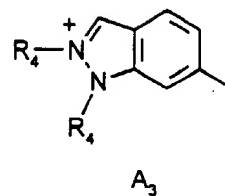
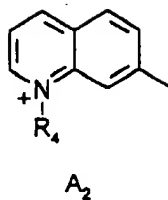
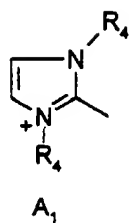
C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

R<sub>3</sub> and R'<sub>3</sub>, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub> alkoxy radicals and acetyloxy radicals,

X<sup>-</sup> is chosen from anions,

A is chosen from structures A<sub>1</sub> to A<sub>19</sub> below:

665040 "SOTRE60



666020-50167660

LAW OFFICES

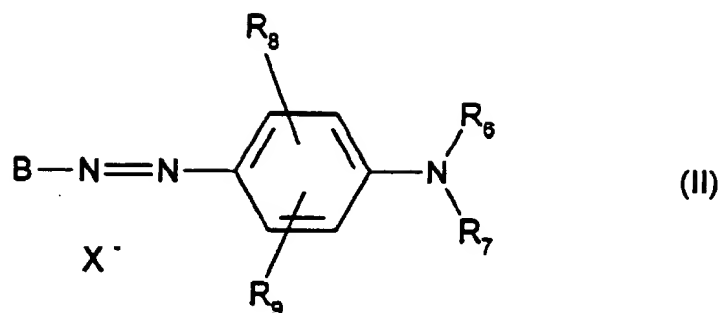
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

\*c1cc(R4)n(R4)c1[N+]([R4])=

**A<sub>19</sub>**

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

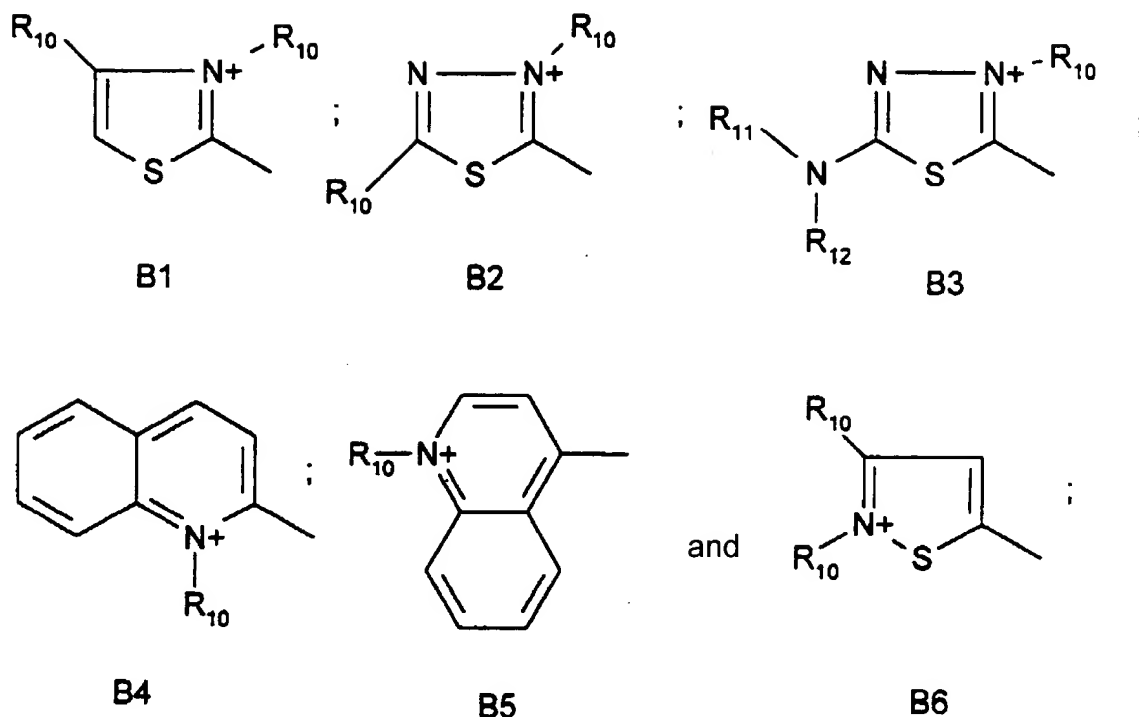
$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

B is chosen from structures  $B_1$  to  $B_6$  below:

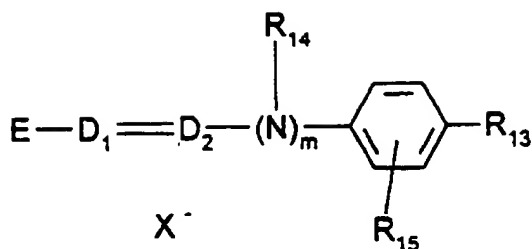


in which:

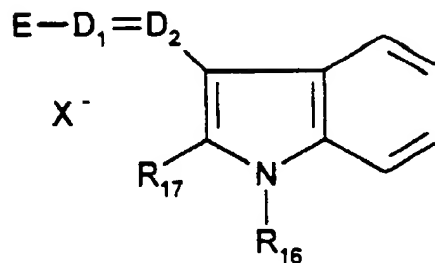
$R_{10}$  is chosen from  $C_1$ - $C_4$  alkyl radicals, and

$R_{11}$  and  $R_{12}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

$R_{13}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkoxy radicals, halogen atoms and an amino radical,

$R_{14}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one to radical chosen from  $C_1$ - $C_4$  alkyl radicals,

$R_{15}$  is chosen from a hydrogen atom and halogen atoms,

$R_{16}$  and  $R_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$D_1$  and  $D_2$ , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

$m$  is 0 or 1,

wherein when  $R_{13}$  is an unsubstituted amino group,  $D_1$  and  $D_2$  are both a

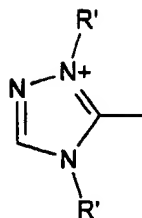
603020-5076460

E is chosen from structures  $E_1$  to  $E_8$  below:





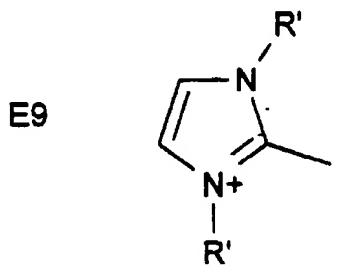
and



E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

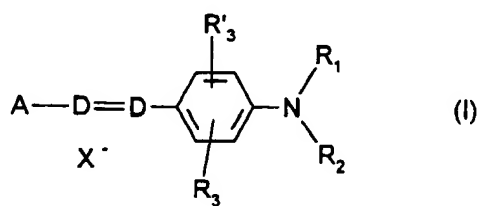
- wherein said second composition comprises at least one oxidizing agent and at least one thickening polymer,
- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

54. A multi-compartment dyeing kit, comprising at least two separate

compartments, wherein a first compartment contains a first composition and a second compartment contains a second composition,

- wherein said first composition comprises at least one thickening polymer and at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below:

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH<sub>2</sub> radicals; or

R<sub>1</sub> and R<sub>2</sub> form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from

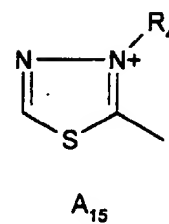
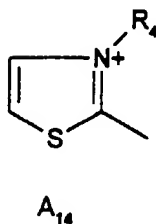
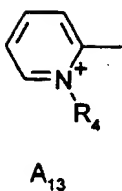
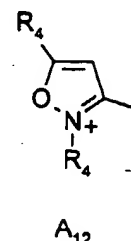
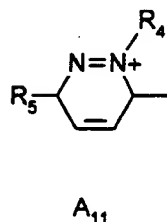
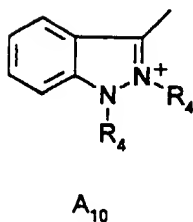
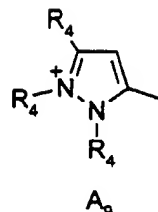
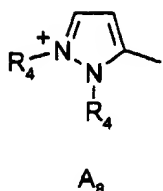
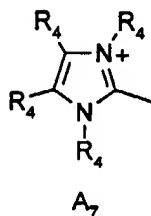
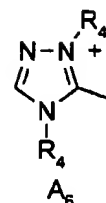
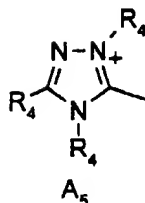
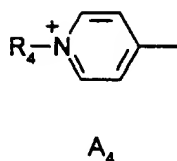
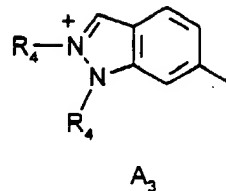
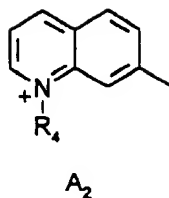
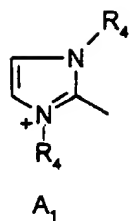
C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

R<sub>3</sub> and R'<sub>3</sub>, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub> alkoxy radicals and acetyloxy radicals,

X<sup>-</sup> is chosen from anions,

A is chosen from structures A<sub>1</sub> to A<sub>19</sub> below:

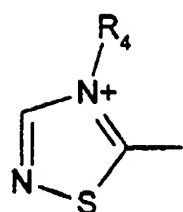
668020" 50161E60



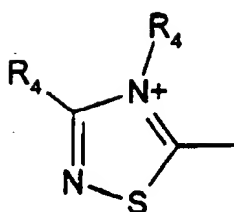
05725.0441-00000

LAW OFFICES

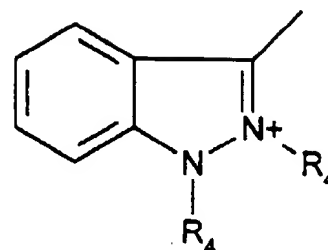
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



A<sub>16</sub>

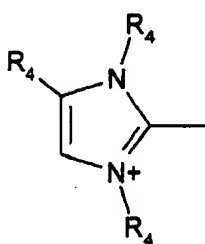


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

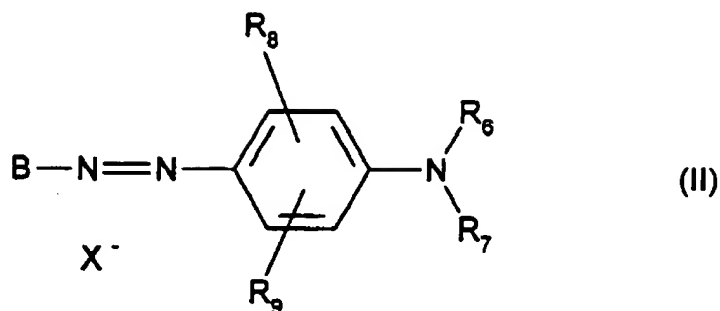
R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

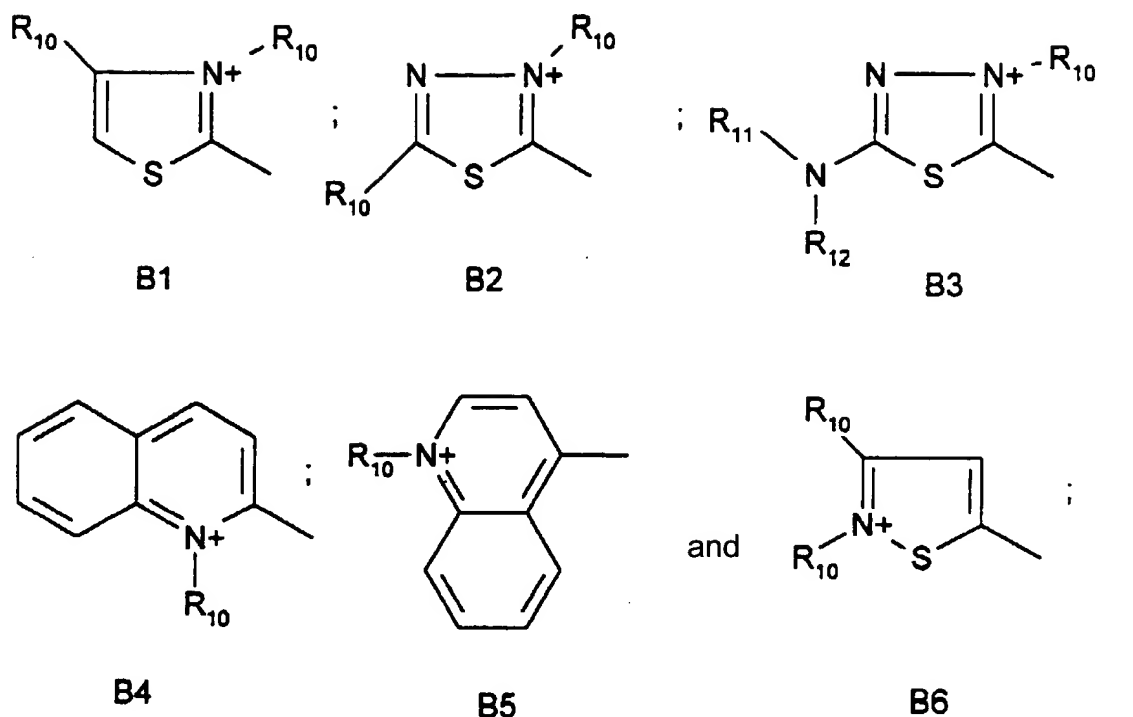
$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

B is chosen from structures  $B_1$  to  $B_6$  below:

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000

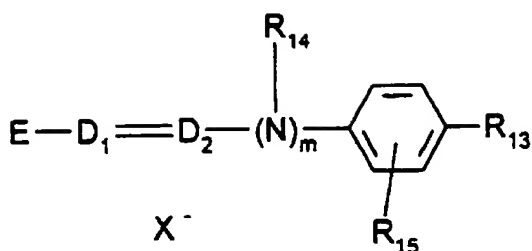


in which:

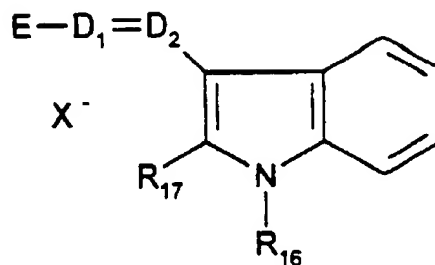
$R_{10}$  is chosen from  $C_1$ - $C_4$  alkyl radicals, and

$R_{11}$  and  $R_{12}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

$R_{13}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkoxy radicals, halogen atoms and an amino radical,

$R_{14}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl radicals,

$R_{15}$  is chosen from a hydrogen atom and halogen atoms,

$R_{16}$  and  $R_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$D_1$  and  $D_2$ , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

$m$  is 0 or 1,

wherein when  $R_{13}$  is an unsubstituted amino group,  $D_1$  and  $D_2$  are both a

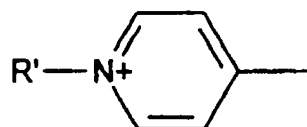
668020-5076E60



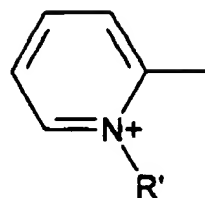
-CH group and m is 0,

X<sup>-</sup> is chosen from anions,

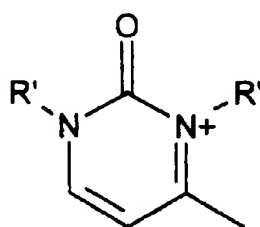
E is chosen from structures E<sub>1</sub> to E<sub>8</sub> below:



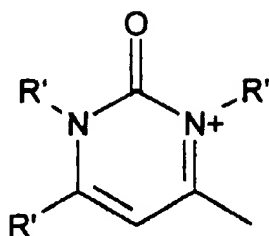
E1



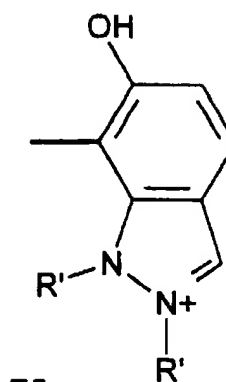
E2



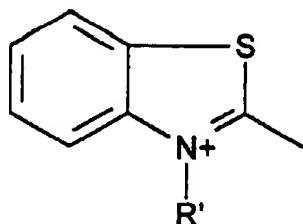
E3



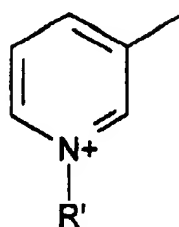
E4



E5

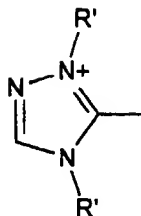


E6



E7

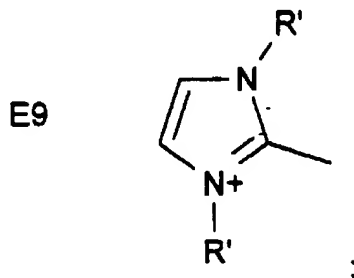
and



E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

-wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit; and

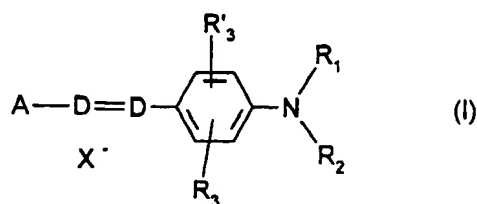
- wherein said second composition comprises at least one oxidizing agent.

55. A multi-compartment dyeing kit, comprising at least two separate compartments, wherein a first compartment contains a first composition and a

second compartment contains a second composition,

- wherein said first composition comprises at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below:

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH<sub>2</sub> radicals;

or

R<sub>1</sub> and R<sub>2</sub> form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

R<sub>3</sub> and R'<sub>3</sub>, which may be identical or different, are chosen from a

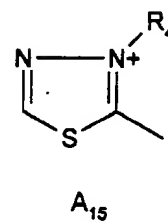
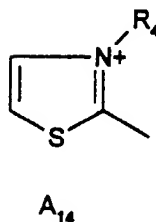
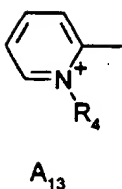
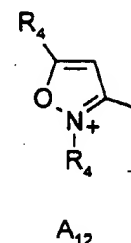
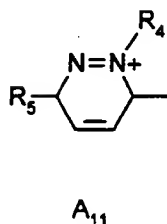
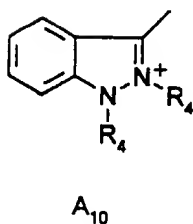
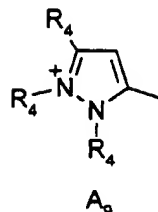
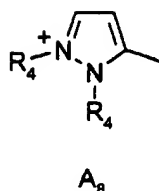
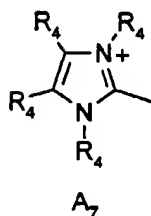
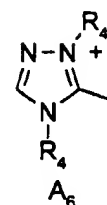
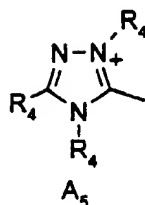
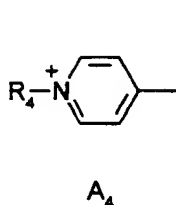
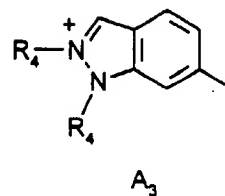
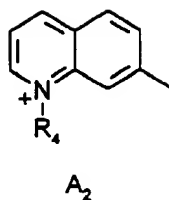
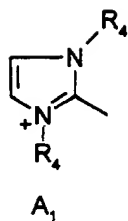
669920-50764260

hydrogen atom, halogen atoms, a cyano radical, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub>  
alkoxy radicals and acetyloxy radicals,

X<sup>-</sup> is chosen from anions,

A is chosen from structures A<sub>1</sub> to A<sub>19</sub> below:

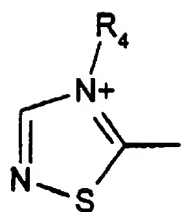
05725.0441-00000



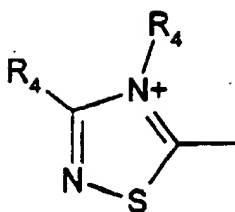
05725.0441-00000

LAW OFFICES

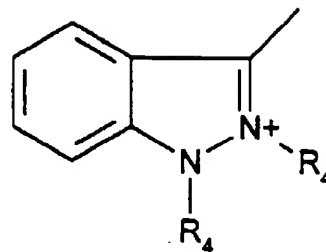
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000



A<sub>16</sub>

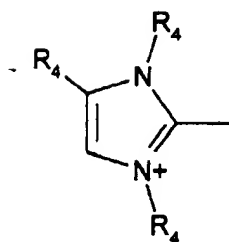


A<sub>17</sub>



A<sub>18</sub>

and



A<sub>19</sub>

in which:

R<sub>4</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals which can be substituted with a hydroxyl radical, and

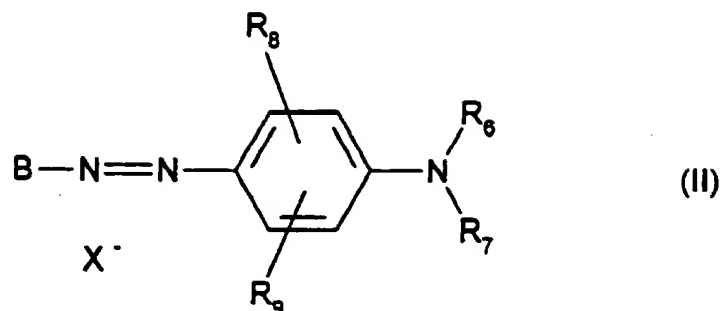
R<sub>5</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkoxy radicals, and

wherein when D represents -CH, when A represents A<sub>4</sub> or A<sub>13</sub> and when

R<sub>3</sub> is not an alkoxy radical, R<sub>1</sub> and R<sub>2</sub> are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

$R_6$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$R_7$  is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with  $R_6$ , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with  $C_1$ - $C_4$  alkyl radicals,

$R_8$  and  $R_9$ , which may be identical or different, are chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl radicals,  $C_1$ - $C_4$  alkoxy radicals and a -CN radical,

$X^-$  is chosen from anions,

B is chosen from structures  $B_1$  to  $B_6$  below:

000020-50767660

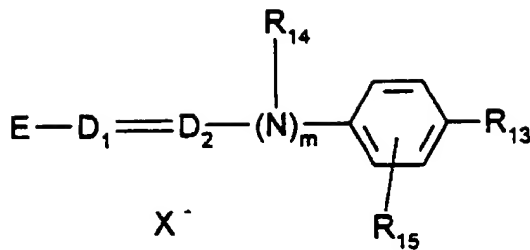


R<sub>10</sub> is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals, and

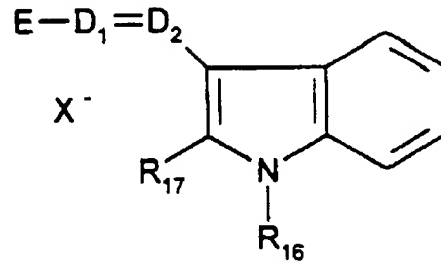
(c) wherein said compounds of formulae (III) and (III') are chosen from

158





(III)



(III')

in which:

$R_{13}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkoxy radicals, halogen atoms and an amino radical,

$R_{14}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl radicals,

$R_{15}$  is chosen from a hydrogen atom and halogen atoms,

$R_{16}$  and  $R_{17}$ , which may be identical or different, are chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals,

$D_1$  and  $D_2$ , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

$m$  is 0 or 1,

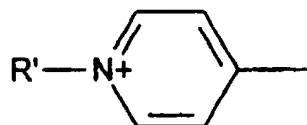
wherein when  $R_{13}$  is an unsubstituted amino group,  $D_1$  and  $D_2$  are both a

000020-50761260

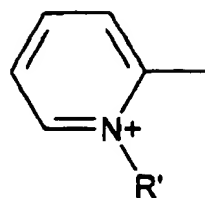
-CH group and m is 0,

X<sup>-</sup> is chosen from anions,

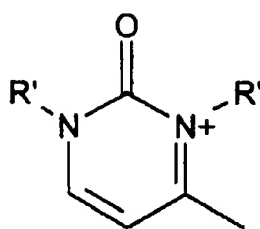
E is chosen from structures E<sub>1</sub> to E<sub>8</sub> below:



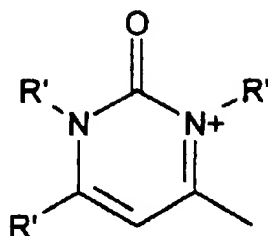
E1



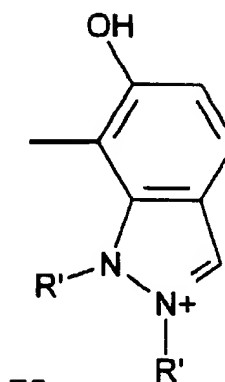
E2



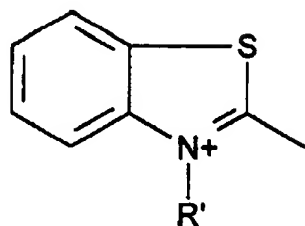
E3



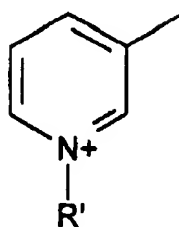
E4



E5

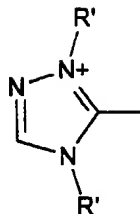


E6



E7

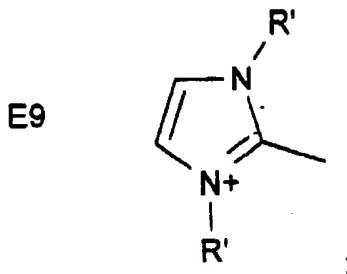
and



E8

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

wherein when m is 0 and when D<sub>1</sub> represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals;

- wherein said second composition comprises at least one oxidizing agent and at least one thickening polymer,

- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

LAW OFFICES

FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
1300 I STREET, N. W.  
WASHINGTON, D. C. 20005  
202-408-4000